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Revisiting the Meaning of Emotional Overinvolvement in Early Development: Prospective Relations with Child Behavior Problems

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ABSTRACT OF THE DISSERTATION

Revisiting the Meaning of Emotional Overinvolvement in Early Development:
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by

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Emotional overinvolvement (EOI) in parents' Five Minute Speech Samples (FMSS; Magaña-Amato, 1993) is thought to measure overconcern and enmeshment with one's child. Although related to maladaptive outcomes in studies of *adult* children, FMSS EOI evidences varied relations with behavior problems in studies with *young* children. These mixed findings may indicate that certain FMSS EOI criteria reflect inappropriate and excessive involvement with *adult* children, but do not indicate maladaptive processes when parenting younger children. The first study evaluated the relevance of the FMSS EOI construct for young children's adjustment given mixed relations in the extant literature that have prompted concern regarding the validity of EOI as a measure of pathological parental *over*involvement with young children. Building upon findings from the first study, the second study examined whether the relation of self-sacrifice/overprotection (SSOP), the most prominent and theoretically pernicious EOI criterion, with elevated levels of child internalizing and attention/hyperactivity problems

four years later (at age 8) could be accounted for by observed parenting (i.e., poor support, high intrusion, high hostility) during an intervening assessment at age 6.

These studies utilized a community sample of 223 child-mother dyads (47.9% female; M_{age_W1} = 49.08 months, M_{age_W2} = 73.34 months, M_{age_W3} = 97.66 months; 56.5% Hispanic/Latina). In the first study, I evaluated the relations of each FMSS EOI criterion with changes in child behavior problems from preschool to first grade (using data from Waves 1 and 2). Findings from the first study indicated that that both the self-sacrifice/overprotection (SSOP) and statements of attitude (SOAs) FMSS EOI criteria predicted increased externalizing problems. In contrast, excessive detail and exaggerated praise were not related to child externalizing behavior problems, and emotional display was not evident in this sample. None of the FMSS EOI criteria evidenced significant relations with internalizing behavior problems. We found evidence of moderation of the effect of SOAs by gender, such that SOAs contributed to increased externalizing problems among boys but not girls. Relations did not differ by maternal race/ethnicity (Hispanic/Latina vs. non-Hispanic/Latina mothers).

Results from study 2 provided support for the primary theoretical assertion of the expressed emotion literature, which posits that *what* parents say about their child and the parent-child relationship reflects (or guides) *how* they interact with their child on a day-to-day basis (Chambless, Bryan, Aiken, Steketee, & Hooley, 1999). Higher levels of SSOP at age 4 predicted higher levels of maternal insensitivity at age 6, and maternal insensitivity predicted higher levels of internalizing (but not attention/hyperactivity) problems at age 8. Test of the indirect effects indicated that SSOP exerted a significant

indirect effect, via maternal insensitivity, on internalizing problems, but only a direct effect on attention/hyperactivity problems. Moreover, none of the conditional indirect effects were significantly different from zero, suggesting an absence of moderated mediation by child gender, maternal race/ethnicity, and single mother status. Taken together, these studies suggest that the FMSS SSOP construct may offer a cost-effective, culturally valid, and clinically valuable screening tool for the detection of pathological parental attitudes that may confer elevated risks for insensitive parenting practices and/or child adjustment difficulties.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1 – INTRODUCTION AND THEORETICAL FRAMEWORK

Preschool children with behavior problems are at increased risk for adjustment difficulties in middle childhood and adolescence (Campbell, 1995; Mesman, Bongers, & Koot, 2001). A large body of research highlights the central role of family relationships and patterns of interaction in the development of children's internalizing and externalizing behavior problems (Patterson, DeBaryshe, & Ramsey, 1989; Stubbe, Zahner, Goldstein, & Leckman, 1993). Therefore, research that aims to identify specific family dynamics that may serve as risk or promotive factors in the etiology of child behavior problems has significant empirical and applied value.

Family Emotional Climate

Family emotional climate is a broad construct that encompasses various facets of the family milieu, such as parenting style, family expressiveness, and the emotional quality of the marital relationship. Evidence suggests that the family emotional climate has a central influence on children's development (Morris, Silk, Steinberg, Myers, & Robinson, 2007). An important determinant of the quality of a family's emotional climate is *family expressiveness*, which refers to the predominant style of exhibiting nonverbal and verbal expressions in a family (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995). Patterns of positive and negative affect expression within the family convey "emotion rules" that are instrumental in socializing children's knowledge of emotions, display rules, and regulatory strategies (Morris et al., 2007; Thompson & Meyer, 2007).

Parental emotional expressivity, particularly expressions of warmth versus hostility, and general expressions of positive versus negative emotion (i.e., not

necessarily directed at a particular child), is related to children's own emotional expression and social behavior. Parental expressions of positive affect are associated with children's emotion understanding, positive emotionality, social competence, prosocial behavior, and self-esteem (Boyum & Parke, 1995; Bronstein, Fitzgerald, Briones, Pieniadz, & D'Ari, 1993; Jude Cassidy, Parke, Butkovsky, & Braungart, 1992; Cumberland-Li, Eisenberg, Champion, Gershoff, & Fabes, 2003; Eisenberg et al., 2001). In contrast, family environments characterized by criticism, hostility, and expressions of negative affect may overwhelm children's emergent emotion regulation skills and deter them from seeking parental support to meet their emotional needs (Fosco & Grych, 2007; Thompson & Meyer, 2007). Parental expressions of negative affect have been associated with negative developmental outcomes, such as externalizing behavior (Halberstadt et al., 1995), but findings are not consistent across studies (Eisenberg et al., 2001; Halberstadt, Crisp, & Eaton, 1999).

In addition to direct contributions to the family emotional climate and child adjustment, parental expressivity may influence child development indirectly via relations to overall parenting style, as well as to specific parenting behaviors (Morris et al., 2007). Parents who express many positive emotions in the family are likely to be warm, supportive, and accepting of their children's emotional responses. In contrast, parents who display high levels of negative emotion in the family are likely to be hostile towards their children and less responsive to children's emotional displays (cold and firm; Halberstadt et al., 1999).

Assessing Family Emotional Climate

Several methods exist for assessing features of the family emotional climate, each with their strengths and weaknesses. Self-report methods offer an efficient and cost-effective assessment approach. Parent and/or child reports, such as the Family Expressiveness Questionnaire (Halberstadt, 1986) and the Family Environment Scale (Moos & Moos, 1981), assess the degree to which different members of the family express a range of positive and negative emotions, as well as perceptions of relationships within the family on various dimensions, such as cohesion, expressiveness, and conflict. However, as Kaugars and colleagues (2007) note, while widespread and easy to administer, reliance on self-report is problematic as the individual's report could be influenced by her/his own psychosocial functioning and/or biases related to situational demands. In addition, parents and children may have difficulty providing objective descriptions of their attitudes and behaviors (McCarty & Weisz, 2002).

Observational methods constitute a second approach to measuring familial processes of emotion expression and exchange. While observational assessments are often perceived as less biased than self-report, they are not without limitations. The dyad's behavior may be influenced by reactivity to a contrived or novel setting (e.g., laboratory), such that low-base rate behaviors may be unlikely to manifest (Carter, Briggs-Gowan, & Davis, 2004). This implication is particularly important for certain constructs, such as parental guilt induction and extreme hostility, which have a low-base rate and may be influenced by social desirability. In addition, certain constructs (e.g.,

sarcasm, guilt-induction) may be difficult to observe and code reliably, particularly during structured interactions (McCarty, Lau, Valeri, & Weisz, 2004).

Narrative assessments constitute a third, and increasingly popular, means of assessing family emotional climate. In contrast to self-report and observational measures, narrative assessments offer a unique window into participants' thoughts and attitudes that are difficult to obtain through direct questioning. When asked to describe a family member and their relationship, the relative must draw upon processes contributing to how s/he conceptualizes self and other (Rogosch, Cicchetti, & Toth, 2004). Thus, "narratives are not 'merely' verbal constructions but are markers of very important intra- and interpersonal emotional processes with implications to the individual's emotional well being as well as to that of their offspring" (Oppenheim, 2006, p. 779). These attributions and processes for organizing and accessing information and emotions about the relationships are presumed to guide the narrator's behavior toward the individual in the absence of actual observation (Chambless, Bryan, Aiken, Steketee, & Hooley, 1999).

Narrative Approaches and the Construct of Expressed Emotion (EE)

Expressed emotion (EE) was initially identified in the context of efforts to elucidate family processes that contribute to relapse in adults with schizophrenia. In a study measuring the family emotional climate and aspects of the parent-child relationship among adults with schizophrenia, patients from families that expressed high levels of criticism, hostility, and/or emotional overinvolvement (i.e., intrusiveness and excessive emotional concern) were more likely to relapse than similar patients from families with low levels of these characteristics (Brown, Monck, Carstairs, & Wing, 1962). EE is

regarded as an index of ongoing family interactions (Kuipers & Bebbington, 1988), and alternately characterized as the "emotional temperature of the household" (Vaughn, 1989), or "the 'blood pressure' of family life" (Kuipers, 1992). Work examining the relation of EE to observed parent-child interactions in both adult and child dyads has supported this view, finding that interactions between members of families high in EE are more likely to be characterized by criticism and/or enmeshment than those of families low in EE (e.g., Hooley, 2007; Wamboldt, O'Connor, Wamboldt, Gavin, & Klinnert, 2000).

The Camberwell Family Interview (CFI; Brown, Birley, & Wing, 1972; Brown & Rutter, 1966) has been referred to as the "gold standard measure of EE," (Hooley & Parker, 2006, p. 386). Developed for clinical settings, the CFI is administered to an individual relative of a patient through a series of semi-structured, open-ended questions about the patient's previous and current psychological difficulties, while providing opportunities for the relative to discuss the patient's functioning in the months prior to hospitalization. The CFI was designed to obtain a report of the patient's behavior and her/his relative's feelings about her/him, and was used to develop the first system of EE coding.

As initially conceived by Brown and colleagues (1972), three primary dimensions within the CFI are used to classify individual narrators as high or low in EE on the basis of vocal tone and/or verbal content: 1) criticism is scored on the basis of vocal tone and/or semantic content that indicates the narrator resents, dislikes, disapproves of, or is annoyed or angered by the patient's behavior or characteristics (e.g., "She's always

screaming, it's very annoying"), with a frequency count taken over the entire speech sample; 2) hostility also reflects dislike or disapproval, but it connotes a more generalized critical attitude and a broader dislike of the patient as a person such that the patient is criticized for who s/he is, rather than for something s/he has done (e.g., "He's incredibly selfish and mean-spirited, everything is 'me, me, me'"). Hostility is rated as present/absent for the narrative as a whole, but, given its strong association to the number of critical comments, researchers typically drop hostility from consideration of EE in favor of the critical remarks frequency count (Hooley, 1986); 3) emotional overinvolvement (EOI) captures excessive concern and worry expressed by the narrator about the relative, and is scored on the basis of five indicators (i.e., self-sacrificing/overprotective attitudes, emotional display, such as crying during the narration, excessive detail, statements of attitude or love, and exaggerated praise). Although emotional overinvolvement in the CFI is traditionally conceptualized as a continuous variable across a 6-point scale from 0 (i.e., none) to 5 (i.e., marked; Leff & Vaughn, 1985), the FMSS typically categorizes EOI as low or high.

The CFI is an effective tool for assessing EE, which evidences predictive validity based on symptom severity and treatment outcome among adults with a variety of psychiatric disorders (Hooley & Parker, 2006). However, the CFI is time consuming to learn, administer, and score, with a mean administration length of 45 minutes for the shortened version, and a similar amount of time required for scoring (Mueser, Bellack, & Wade, 1992). The cumbersome nature of the CFI prompted efforts to develop cost- and time-efficient narrative techniques for assessing EE.

The Five Minute Speech Sample (FMSS; Magaña et al., 1986) was developed as an alternative to the lengthy CFI. Initially used in clinical settings, the FMSS prompts the relative (usually a parent) to describe the kind of person the patient is and how the two of them get along. Like the CFI, the FMSS assesses central dimensions of EE – criticism (criticism) and emotional overinvolvement (EOI) – and has demonstrated an acceptable degree of correspondence with the CFI (Magaña et al., 1986). In two separate validation samples of adult patients with schizophrenia, a high critical score on the FMSS significantly related to a high critical score on the CFI, and the same was true for EOI scores (Magaña et al., 1986). Despite significant concordance, the FMSS appears to be a more conservative measure of EE than the CFI, with roughly one third of cases rated as low EE on the FMSS receiving high EE ratings on the CFI (Leeb et al., 1991; Magaña et al., 1986). Thus, FMSS ratings of criticism and EOI are considered to be more specific, yielding few false positives, but potentially less sensitive, yielding a higher rate of false negatives than the CFI.

EE and Adult Adjustment

Studies using the CFI or FMSS have yielded a robust literature on the significance of EE for understanding adult adjustment in clinical and community samples, and, more recently, in pediatric samples as well. However, EE is still not entirely understood in terms of its composition, mechanisms of transmission and influence, and applicability to diverse populations, particularly in research with young children.

Research with adult samples reveals consistent relations between EE and rates of psychiatric recovery and relapse across a broad range of disorders, including

schizophrenia (Brown et al., 1972), mood disorders (Hooley, Orley, & Teasdale, 1986; Vaughn & Leff, 1976), anxiety disorders (Chambless, Bryan, Aiken, Steketee, & Hooley, 2001), and substance abuse (O'Farrell, Hooley, Fals-Stewart, & Cutter, 1998). As assessed categorically, "high" EE is a general predictor of poor outcomes across an array of conditions (Butzlaff & Hooley, 1998).

Although most research has focused on relations between categorical EE scores and relapse, some have questioned whether EE is better conceptualized as a multi-faceted construct given that the vast majority of studies do not find a significant association between criticism and EOI (see Chambless et al., 1999, for a review). Furthermore, studies with adults that have investigated specific relations of criticism and EOI with diagnostic outcomes have found varied patterns of associations.

Criticism is widely regarded as the most important component of EE (Hooley, 2007), in large measure due to the a priori value the developers of the EE coding system placed on its capacity to influence psychiatric relapse rates (Brown et al., 1972). Criticism is consistently related to relapse and/or poorer outcomes in studies of individuals with alcohol abuse (O'Farrell et al., 1998), unipolar depression (Hooley et al., 1986), bipolar disorder (Miklowitz, Goldstein, Nuechterlein, Snyder, & Mintz, 1988), eating disorders (Fischmann-Havstad & Marston, 1984; Hedlund, Fichter, Quadflieg, & Brandl, 2003; LeGrange, Eisler, Dare, & Hodes, 1992), and schizophrenia (Butzlaff & Hooley, 1998).

In contrast to largely consistent relations between criticism and adult pathology, relations between EOI and adult functioning are mixed. Among individuals with

schizophrenia, EOI is related to higher rates of relapse (Vaughn, Snyder, Jones, Freeman, & Falloon, 1984), and higher levels of depression and anxiety (Bentsen et al., 1996). In one study of 42 adult patients with schizophrenia, EOI better predicted patient adjustment than criticism such that individuals from high EE families due to EOI had poorer premorbid adjustment and greater residual symptomatology at discharge than individuals from families with high EE as a function of criticism (Miklowitz, Goldstein, & Falloon, 1983). In other studies, EOI has been associated with premature treatment dropout for individuals receiving treatment for eating disorders (Szmukler, Eisler, Russell, & Dare, 1985) or anxiety disorders (Chambless & Steketee, 1999).

Importantly, other studies have not found a relation between EOI and adult psychopathology (see Singh, Harley, & Suhail, 2013, for a review), with some findings actually suggesting the converse – that EOI may be associated with positive adjustment in certain domains. In a study of 28 schizophrenic patients and their mothers, King (2000) found no significant association between EOI and schizophrenia symptoms at 18-month follow-up. In this same sample, higher EOI was associated with less severe hostile and uncooperative symptoms at the 9-month follow-up. In another study of 69 schizophrenic outpatients, higher levels of EOI predicted relapse on the one hand, but also predicted better social adjustment within the family context on the other hand (King & Dixon, 1995). The authors hypothesized that the intrusive quality of a high EOI relative may push the patient to achieve higher levels of functioning, yet are careful to state that a patient may profit most from an optimal level of EOI. Importantly, the potential for EOI to serve as a positive influence is not limited to individuals with schizophrenia, as one

study documented a positive association between EOI and adjustment outcomes among patients with borderline personality disorder (Hooley & Hoffman, 1999).

EE and Child Adjustment

Rising interest in the salience of EE for understanding adjustment in adults prompted efforts to examine if and how EE may relate to adjustment in childhood. The family emotional climate may be disproportionately salient for young children because they spend the majority of their time in the family milieu, and are far more dependent on their parents for socialization, nurturance, and guidance (Campbell, 1995), whereas peers take on increasing salience in later childhood and adolescence (Sroufe, Egeland, & Carlson, 1999).

In addition to the sensitivity of young children to parenting influences, the organizational nature of development holds that early experience is special because it sets the stage for later adjustment such that a prior disturbance in the parent-child relationship may undermine a child's ability to successfully negotiate subsequent age salient issues (Sroufe & Rutter, 1984; Sroufe, 1990). Relational disturbances early in development are of particular concern as toddlerhood and the preschool years constitute important periods of development during which children internalize their beliefs and expectations about others (Bretherton & Munholland, 1999) and acquire independent self-regulation skills (Calkins, Blandon, Williford, & Keane, 2007; Calkins & Leerkes, 2011; Posner & Rothbart, 2000). Positive representations of self and other, and regulatory competence increase the likelihood that the child will advance on a positive developmental course,

whereas disruptions in these processes increase the probability that the child will develop adjustment problems (Campbell, 1995).

Consistent with findings in the adult clinical literature, numerous studies have documented associations between parental EE and child adjustment. For example, elevated rates of EE have been found among parents of children and adolescents with anxiety and disruptive behavior disorders (Hibbs et al., 1991), attention deficit-hyperactivity disorder, conduct disorder, and substance abuse problems (Schwartz, Dorer, Beardslee, Lavori, & Keller, 1990), as well as depressive disorders (Asarnow, Tompson, Hamilton, Goldstein, & Guthrie, 1994; Schwartz et al., 1990). However, only a handful of studies have examined EE in families of very young children (i.e., children age 4 or younger). Beginning with a study of EE in a sample of preschool-aged children (Baker, Heller, & Henker, 2000), subsequent studies have expanded to include families of infants (Kaugars et al., 2007), toddlers (Rogosch et al., 2004), and samples with children of sundry ages (Gar & Hudson, 2008; McCarty & Weisz, 2002).

As in the adult literature, child researchers have increasingly disaggregated the overarching construct of EE into its two central components of criticism and EOI. This approach seems well-founded at the theoretical level, given differences in the meaning of these constructs, and has also been supported by empirical work suggesting distinct associations with child adjustment. Criticism evidences fairly consistent associations with elevated externalizing problems, such as disruptive behavior and conduct disorder (Baker et al., 2000; Nelson, Hammen, Brennan, & Ullman, 2003; Peris & Baker, 2000; Stubbe et al., 1993), as well as with internalizing problems (Asarnow, Tompson, Woo, & Cantwell,

2001; Hirshfeld, Biederman, Brody, Faraone, & Rosenbaum, 1997; Stubbe et al., 1993). However, whereas criticism is a robust predictor of adjustment across both broadband internalizing and externalizing symptoms, findings with EOI in child samples are less consistent.

The majority of studies examining the relation of overall EOI to child adjustment do not find significant relations with either child externalizing or internalizing behavior problems (Baker et al., 2000; McCarty & Weisz, 2002; Nelson et al., 2003; Vostanis, Nicholls, & Harrington, 1994; Wamboldt et al., 2000). However, a few investigations have found associations between high EOI and child pathology, specifically anxiety symptoms (Gar & Hudson, 2008; Hirshfeld et al., 1997; Stubbe et al., 1993).

A Developmental Perspective on EOI

Developmental differences in the functional significance of EOI may contribute to the apparent mixed relations between EOI and adjustment outcomes across the developmental spectrum. Although the criteria for EOI were empirically derived from research on adult patients with schizophrenia, they have since been applied in studies of younger children. However, in contrast to parental criticism, which is thought to reflect negative parental attributions and behaviors that contribute to children's emotion dysregulation and behavior problems at all ages (McCarty & Weisz, 2002; Wamboldt et al., 2000), some elements of EOI may have negative implications for adult children, yet represent developmentally appropriate interactions between parents and their young children.

In narrative measures of EE, EOI is rated based on multiple (and potentially disparate) dimensions of the parent-child relationship, including (a) statements reflecting attitudes and/or behaviors that are overprotective, self-sacrificing, lack objectivity, or indicate a blurring or dissolution of boundaries between the caregiver and her/his child (SSOP; e.g., “Well, when she gets a cold. Ah, well I’m crying there with her and for her not to get sick,” “I’m concerned for him that he might starve for my attention”), (b) an emotional display (e.g., caregiver cries during the narrative); (c) excessive detail about the child’s past (e.g., a minute-long description of a child’s first week post-delivery without relating it to the present), (d) statements of attitude (SOAs; i.e., statements of love or a willingness to do anything for the child in the future; e.g., "I love my daughter," “he is my whole life, my child”), and (e) exaggerated praise of the child indicated by 5 or more positive remarks (e.g., “s/he’s smart”).

Extant work suggests that SSOP and emotional display may be associated with enmeshed and/or intrusive parent-child relationships and elevated rates of child behavior problems. For example, in a study of adolescents, a revised FMSS EOI rating, which exempted cases rated solely on the basis of SOAs and exaggerated praise, found that EOI was positively related to concomitant youth internalizing problems and parent-adolescent boundary dissolution (Wamboldt et al., 2000). In younger children, cross-sectional findings suggest that SSOP and emotional display are positively associated with externalizing and internalizing problems (McCarty & Weisz, 2002), and higher rates of SSOP and emotional display have been found among mothers of anxious children relative to mothers of comparison children (Gar & Hudson, 2008). However, in other studies,

SSOP did not differentiate between depressed children and controls (Silk et al., 2009), or was entirely absent from parents' FMSS (Kershner, Cohen, & Coyne, 1996).

Although prior research suggests that SSOP is associated with child adjustment problems, some researchers have suggested that affective content that is considered self-sacrificing and overprotective in may be developmentally appropriate in certain contexts (McCarty & Weisz, 2002; Wamboldt et al., 2000). For example, statements that would yield a rating of overprotectiveness in a relationship with an adult (e.g., "He's always by my side, I take him wherever I go") may indicate healthy emotional support and physical security when parenting a young child. Moreover, Wamboldt and colleagues (2000) note that SSOP should be evaluated in consideration of the characteristics of the sample under study, noting, for example, that SSOP may not be pernicious among children with serious medical and/or psychological impairments that require close parental monitoring and involvement. Although the authors do not make this point, one could argue the converse, namely, that SSOP is likely pernicious when it occurs in the absence of a legitimate need, and thus constitutes a parental failure to support the child's normative transition toward greater autonomy.

Researchers suggest that SOAs and exaggerated praise may indicate appropriate parental involvement with young children (Kershner et al., 1996; McCarty & Weisz, 2002; Psychogiou, Daley, Thompson, & Sonuga-Barke, 2007; Wamboldt et al., 2000). In support of these assertions, positive remarks, which form the basis of exaggerated praise, have been related to concurrent reports of fewer child behavior problems (McCarty & Weisz, 2002; Psychogiou et al., 2007; Wamboldt et al., 2000), are less frequent in child

clinical versus community samples (Kershner et al., 1996; Silk et al., 2009), and are related to more maternal sensitivity during observed parent-child interactions (e.g., Daley et al., 2003; Kim Park, Garber, Ciesla, & Ellis, 2008; Wamboldt et al., 2000). In contrast to positive remarks, there is little evidence that SOAs are associated with positive child adjustment (McCarty & Weisz, 2002; Silk et al., 2009), and the only study to suggest as much evaluated a global index of positivity that combined SOAs with positive remarks (Psychogiou et al., 2007).

Only a few studies have assessed excessive detail, with some showing negative associations with child adjustment (e.g., metabolic control in children and adolescents with diabetes; Liakopoulou et al., 2001), and others finding no significant relations with behavior problems (McCarty & Weisz, 2002; Silk et al., 2009). McCarty and Weisz (2002) suggested that the description of a child's birth or infancy, which is considered excessive detail about the past in the context of adult EE, might be more normative for the parent of a preschooler than an adult child.

The Need to Revisit the Construct of EOI

The heterogeneity of the EOI construct may account for the ongoing lack of clarity regarding EOI's relation to child adjustment, particularly in young children when some EOI facets may be developmentally appropriate. Therefore, the first study in this dissertation evaluated prospective relations of each EOI criterion (i.e., SSOP, emotional display, excessive detail, SOAs, exaggerated praise) with changes in observer-rated externalizing and internalizing behavior problems from the preschool period to first grade in a large, ethnoracially diverse community sample of mother-preschooler dyads.

Moreover, we evaluated these relations in consideration of potential contextual influences on EOI and/or child behavior problems (i.e., maternal psychopathology, maternal stress, single mother status, and socioeconomic status [SES]), and also explored possible moderating effects of child gender and/or maternal race/ethnicity on these relations.

The primary aim of study 1 was to identify the EOI criteria that present inappropriate overinvolvement, even amongst young children. We chose to examine the influence of EOI on change in child behavior problems from preschool to first grade as it represents a period of change in the "developmental agenda" (Sameroff & Haith, 1996; Sameroff, 1989) in many cultures, including the United States, when children evince increasing independence and responsibility (Whiting & Edwards, 1988). During the preschool period, sensitive parenting (i.e., provision of support for the child's autonomy while remaining warm and available for assistance) is implicated in the child's development of a sense of competence and instrumentality. In turn, as a function of sensitive parenting, the child's emergent sense of agency and competence enhances her/his ability to engage in self-regulatory control and self-reliant efforts when immersed in the social context of peers and teachers away from the family (Sroufe, 1995). The transition to formal schooling (i.e., first grade) challenges children's abilities to function autonomously and self-reliantly. As such, the attitudes indexed by EOI, which presumably undermine the parent's encouragement of these key competencies are expected to be particularly relevant to change in children's behavior problems during this period.

An Explanatory Model of EE Effects on Child Adjustment

In addition to documenting the developmental significance of the family emotional climate in terms of EE, there is a need to empirically evaluate theoretically-specified mechanisms by which these effects may be transmitted from parent to child. While several studies have linked parents' expression of EE with poorer child adjustment, independent of other putative risk factors (e.g., maternal psychopathology, maternal stress, family SES), we do not know *how* these attitudes undermine child adjustment. One of the core assumptions in the EE literature is that the attitudes and feelings expressed by the relative towards the child during the interview are representative of the relative's behaviors toward the child over time (Vaughn & Leff, 1976). As reviewed by McCarty and colleagues (2004), however, few studies have examined whether the constructs captured by the EE coding system actually correspond to observed behaviors in the course of parent-child interactions, and the little work that does exist has focused on families of *adult* children. Moreover, mirroring studies on the adaptive implications of EE for child and adult adjustment, relations of criticism to observed parenting are more consistent than those of EOI to observed parenting, particularly in studies with young children.

Based on results from study 1 and consistent with prior research suggesting that SSOP may be the driving force in EOI effects, the second study in this dissertation evaluated the contribution of SSOP during the preschool period (age 4) to child internalizing and inattention/hyperactivity problems four years later (age 8) as related to intervening parenting quality during the first grade (age 6). As such, the primary aim of

the second study in this dissertation was to elucidate the mechanisms that account for the relation of EE (specifically SSOP) to child adjustment.

Theoretically, of all the EOI criteria, SSOP should be the most strongly related to problematic parenting and, by extension, to child maladaptation because it signifies the parent's difficulty in acknowledging the psychological distinctiveness of the child (i.e., boundary dissolution; Kerig, 2005). Difficulties in maintaining a balance between parental protectiveness and "letting go" (Lieberman, 1992) may translate into insensitive parenting wherein the parent discourages the attainment of autonomy and independence, and/or places developmentally inappropriate demands on the child to provide the parent with nurturance and comfort. These dynamics may undermine the child's successful negotiation of the dual developmental goals of connectedness and individuation (Mahler, Pine, & Bergman, 1975; Pine, 1979), and contribute to the development of both internalizing and externalizing problems (e.g., Carlson & Sroufe, 1995; Egeland, Pianta, & O'Brien, 1993; Macfie, McElwain, Houts, & Cox, 2005).

Consistent with these theoretical assertions that SSOP is the "active ingredient," most studies that have investigated the relation of individual components of EOI to measures of adjustment in samples of both adult and young children, including Magaña and colleagues' (1986) original work, have found that SSOP is more strongly (or more consistently) related to negative child adjustment outcomes than other EOI criteria (e.g., McCarty & Weisz, 2002; Wamboldt et al., 2000). However, there is a dearth of literature examining the relation of SSOP to observed parenting behaviors in both adult and child samples. Therefore, the second study in this dissertation evaluated prospective relations

among SSOP, parenting quality, and child adjustment, as moderated by the sociodemographic characteristics of maternal race/ethnicity, child gender, and family structure (i.e., single mother status).

Strengths and Implications

Together, the studies in this dissertation will advance our understanding of EOI and inform family-based prevention and intervention efforts to support positive child development. While previous efforts to elucidate the meaning of EOI in early development have yielded important and necessary advances toward a comprehensive developmental model of EOI, their impact has been hampered by several key limitations. First, most of these studies employed heterogeneous samples of children in terms of age, thereby constraining the ability to assess the relevance of these constructs for children at different developmental periods. Second, most of the children in these studies were diagnosed with psychological and/or medical disorders, which limits the generalizability of obtained findings to community populations for whom early identification of problematic patterns of family interaction and expressiveness may inform prevention efforts. Third, many of the studies employ cross-sectional designs that preclude the ability to evaluate directional hypotheses regarding if and how EOI contributes to child pathology. Fourth, prior studies have been limited to correlational or between-group analyses in the absence of control for potential covariates, including the co-occurrence of multiple EOI criteria. Fifth, extant work has largely relied on parent reports of both EOI and child adjustment, which presents issues due to shared method variance. Finally, the majority of studies conducted to date have utilized predominantly Caucasian, middle- to

upper-class samples, presenting issues regarding the generalizability of findings to other ethnic and socioeconomic groups.

The studies presented herein seek to improve upon the limitations of extant work in several important ways. First, I drew on a large sample of mother-child dyads (N=223) that were selected to be fairly homogenous in terms of age (M_{ageW1} = 49.08, SD = 2.91 months). Second, these dyads were recruited from community agencies serving preschool-aged children and thus support the investigation of EOI and child adaptation in a population for whom intervention efforts may be especially promising. Third, the longitudinal design of the current investigation supported the evaluation of prospective relations of each EOI criterion with child adjustment (Study 1) and of SSOP with parenting (Study 2). Fourth, the current analyses considered the effects of potential covariates, including the co-occurrence of multiple EOI criteria, and potentially salient environmental factors, such as maternal psychopathology, maternal stress, single mother status, and family SES, Fifth, these studies employed multi-method and multi-informant assessments of child adjustment (i.e., observer, child, and parent) to minimize bias associated with shared method variance between maternal EE and maternal perceptions of child behavior. Finally, in contrast to prior work with predominantly Caucasian, middle- and upper-class samples, these investigations drew on an ethnically and economically diverse sample (i.e., 56.5% Hispanic/Latino; 33.2% in poverty).

Summary

EOI has been described as a "destructive force among kin and a failure to preserve culturally appropriate boundaries among self-systems" (Jenkins, 1992, p. 217).

However, developmental scientists have questioned whether some of the criteria that signify pathological overinvolvement with adult children represent developmentally appropriate interactions between parents and their young children. These studies contribute to the literature on EE and child development by focusing on SSOP, employing comprehensive longitudinal assessments with multiple methods and informants, and drawing on an ethnically and economically diverse group of children. Furthermore, they shed light on the developmental validity of the EOI construct, particularly SSOP, and highlight the potential utility for narrative descriptions of parental attitudes and behaviors to predict actual parenting behaviors and child adjustment across time.

Prior studies have suggested that EE is a modifiable risk factor for child adjustment, as decreases in EE during and/or following the course of treatments targeting child behavior problems and/or parenting practices have been associated with subsequent improvements in child adjustment (Gar & Hudson, 2009; Vostanis, Burnham, & Harris, 1992). These findings suggest that interventions that directly target parental attitudes and related practices may be a valuable point of entry to attenuate child adjustment difficulties and dysfunctional parent-child relationships. The studies in this dissertation critically evaluate the EOI construct and highlight the salience of SSOP for understanding and promoting positive parenting and child adjustment.

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CHAPTER 2 – THE MEANING OF EMOTIONAL OVERINVOLVEMENT IN EARLY DEVELOPMENT: PROSPECTIVE RELATIONS WITH CHILD BEHAVIOR PROBLEMS

Abstract

Emotional overinvolvement (EOI) in parents' Five Minute Speech Samples (FMSSs; Magaña-Amato, 1993) is thought to measure overconcern and enmeshment with one's child. Although related to maladaptive outcomes in studies of *adult* children, FMSS EOI evidences varied relations with behavior problems in studies with *young* children. These mixed findings may indicate that certain FMSS EOI criteria reflect inappropriate and excessive involvement with *adult* children, but do not indicate maladaptive processes when parenting younger children. Thus, this study evaluated relations of each FMSS EOI criterion with changes in child behavior problems from preschool to first grade in a community sample of 223 child-mother dyads (47.98% female; Wave 1 M_{age} = 49.08 months; 56.50% Hispanic/Latina). Maternal FMSS EOI ratings were obtained at Wave 1, and independent examiners rated child externalizing and internalizing behavior problems at Wave 1 and again two years later. Path analyses indicated that both the self-sacrifice/overprotection (SSOP) and statements of attitude (SOAs) FMSS EOI criteria predicted increased externalizing problems. In contrast, excessive detail and exaggerated praise were not related to child externalizing behavior problems, and emotional display was not evident in this sample. None of the FMSS EOI criteria evidenced significant relations with internalizing behavior problems. Multigroup comparisons indicated that the effect of SOAs on externalizing behavior problems was significant for boys but not for

girls, and there were no significant group differences by race/ethnicity. These findings point to the salience of SSOP and SOAs for understanding the developmental significance of EOI in early development.

The Meaning of Emotional Overinvolvement in Early Development:

Prospective Relations with Child Behavior Problems

Expressed emotion (EE) is an index of family emotional climate that originated in studies of *adult* psychiatric patients and their caregivers to examine the contribution of family processes to psychiatric relapse and symptomatology (Brown & Rutter, 1966). In recent years, EE has garnered increased attention as an index of family emotional climate that is likely to influence *young* children's behavioral adjustment as well (e.g., Baker, Heller, & Henker, 2000). EE effects are presumed to be especially salient during the preschool period when children are strongly affected by the familial context (Campbell, 1995), and early models of behavior and regulation form with enduring consequences for later adaptation (Calkins, Blandon, Williford, & Keane, 2007; Sroufe & Rutter, 1984). Moreover, because preschoolers' adjustment is associated with academic and social difficulties in middle childhood and adolescence (Campbell, 1995; Mesman, Bongers, & Koot, 2001), the current effort to understand if and how the family emotional climate may influence stability or change in behavior problems across the transition from preschool to formal schooling has significant empirical and applied impact.

EE assessments include the semi-structured Camberwell Family Interview (Brown, Birley, & Wing, 1972; Brown & Rutter, 1966) and the briefer Five Minute Speech Sample (FMSS; Magaña et al., 1986). In both assessments, EE refers to caregivers' expressed criticism (i.e., dislike or disapproval) of the child and/or their emotional overinvolvement (EOI), which is based on heterogeneous criteria (e.g., excessive worry/concern, self-sacrifice, exaggerated praise) that are thought to reflect

enmeshed parent-child relationships. The attitudes expressed by a parent about their child during EE assessments are presumed to guide parenting behavior, with attendant implications for child adjustment (Brown et al., 1972; Hooley, 2007).

Relative to consistent associations between criticism and problem behaviors in EE studies with young children (e.g., McCarty & Weisz, 2002; Wamboldt, O'Connor, Wamboldt, Gavin, & Klinnert, 2000), relations between EOI and child behavior problems are mixed (e.g., Hirshfeld, Biederman, Brody, Faraone, & Rosenbaum, 1997, and Stubbe, Zahner, Goldstein, & Leckman, 1993, versus McCarty & Weisz, 2002, and Wamboldt et al., 2000). This has stimulated debate among child researchers regarding how to conceptualize EOI in the context of parenting young children, and has prompted some to either modify EOI criteria (e.g., Daley et al., 2003), or omit EOI from studies of EE with young children entirely (e.g., Gravener et al., 2012). The present investigation utilized the FMSS measure as it is the predominant means of assessing EE in child samples relative to the Camberwell Family Interview (Hooley & Parker, 2006).

The goal of this study was to evaluate whether adult-derived EOI criteria are appropriate indices of parental EOI with preschool-aged children as indicated by changes in child behavior problems from preschool to first grade. This investigation joins prior studies that have examined distinct relations between one or more EOI criteria and child behavior problems (Gar & Hudson, 2008; Hirshfeld et al., 1997; Kershner, Cohen, & Coyne, 1996; McCarty & Weisz, 2002; Psychogiou, Daley, Thompson, & Sonuga-Barke, 2007; Silk et al., 2009; Stubbe et al., 1993; Wamboldt et al., 2000). However, we extend prior research by examining a) all facets of the EOI construct, b) relations between each

EOI criterion and changes in child behavior problems, c) independent examiners' reports of child behavior instead of parent or child self-reports, and d) gender and race/ethnicity as potential moderators of EOI criterion effects on behavior problems.

The parental attitudes and behaviors indexed by EOI have been described as a "destructive force among kin and a failure to preserve culturally appropriate boundaries among self-systems" (Jenkins, 1992, p. 217). When parent-child boundaries become overly diffuse, intrusive patterns may ensue, wherein the parent either relies on the child to meet their needs without respecting the child's psychological separateness (e.g., role-reversal; Jacobvitz & Sroufe, 1987), or engages in psychologically controlling processes, such as guilt induction, that suppress the child's bids for autonomy (Barber, 1996). Both patterns compromise the child's self-regulation as the parent's expectation that the child meet their needs may be overstimulating (Jacobvitz & Sroufe, 1987) at the same time their lack of support may thwart the child's regulatory capacities (Carlson, Jacobvitz, & Sroufe, 1995). Early deficits in regulatory abilities may be particularly pernicious as children encounter academic and socioemotional challenges in school, and are expected to meet higher standards of behavior regulation.

As discussed earlier, EOI has been associated with poor psychiatric prognosis and observational ratings of enmeshed family interactions among *adults* with psychiatric illnesses (e.g., Wuerker, Haas, & Bellack, 1999; Yan, Hammen, Cohen, Daley, & Henry, 2004), but associations between EOI and child outcomes are inconsistent. Some studies found associations between parents' EOI and child anxiety (e.g., Hirshfeld et al., 1997; Stubbe et al., 1993), and two studies documented elevated rates of EOI among parents

with depressed children (Asarnow, Tompson, Hamilton, Goldstein, & Guthrie, 1994; Asarnow, Tompson, Woo, & Cantwell, 2001), yet most studies have not found significant relations between EOI and either children's adjustment or the quality of observed parent-child interactions (e.g., Baker et al., 2000; Cruise, Sheeber, & Tompson, 2011; McCarty & Weisz, 2002; Wamboldt et al., 2000).

Given varied findings, researchers have suggested that only some EOI criteria indicate inappropriate and excessive parental involvement in childhood. In the FMSS, a high EOI score is given based on the presence of a) statements reflecting attitudes and/or behaviors that are overprotective, self-sacrificing, lack objectivity, or indicate boundary dissolution (SSOP; e.g., "I'm concerned for him that he may starve for my attention"); b) an emotional display (e.g., participant cries during the narrative); or c) a combination of two or more of the following: excessive detail about the child's past (e.g., a minute-long description of the child's first week post-delivery without relating it to the present), one or more statements of attitude (SOAs; i.e., statements of love or a willingness to do anything for the child in the future), and/or exaggerated praise of the child (i.e., five or more positive remarks that praise the child's behavior or characteristics). These elements tap a range of parental attitudes that may connote enmeshed and/or intrusive behaviors, or an idealization of the child. FMSS that include either moderate (but not full) evidence of SSOP, and FMSS that include SOAs *or* exaggerated praise (but not both) are categorized as borderline EOI (Magaña-Amato, 1993).

Extant work suggests that SSOP and emotional display may be associated with enmeshed and/or intrusive parent-child relationships and elevated rates of child behavior

problems. For example, in a study of adolescents, a revised FMSS EOI rating, which exempted cases rated solely on the basis of SOAs and exaggerated praise, found that EOI was positively related to concomitant youth internalizing problems and parent-adolescent boundary dissolution (Wamboldt et al., 2000). In younger children, cross-sectional findings suggest that SSOP and emotional display are positively associated with externalizing and internalizing problems (McCarty & Weisz, 2002), and higher rates of SSOP and emotional display have been found among mothers of anxious children relative to mothers of comparison children (Gar & Hudson, 2008). However, in other studies, SSOP did not differentiate between depressed children and controls (Silk et al., 2009), or was entirely absent from parents' FMSS (Kershner et al., 1996).

Researchers suggest that SOAs and exaggerated praise may indicate appropriate parental involvement with young children (Kershner et al., 1996; McCarty & Weisz, 2002; Psychogiou et al., 2007; Wamboldt et al., 2000). In support of these assertions, positive remarks, which form the basis of exaggerated praise, have been related to concurrent reports of fewer child behavior problems (McCarty & Weisz, 2002; Psychogiou et al., 2007; Wamboldt et al., 2000), are less frequent in child clinical versus community samples (Kershner et al., 1996; Silk et al., 2009), and are related to more maternal sensitivity during observed parent-child interactions (e.g., Daley et al., 2003; Kim Park, Garber, Ciesla, & Ellis, 2008; Wamboldt et al., 2000). In contrast to positive remarks, there is little evidence that SOAs are associated with positive child adjustment (McCarty & Weisz, 2002; Silk et al., 2009), and the only study to suggest as much

evaluated a global index of positivity that combined SOAs with positive remarks (Psychogiou et al., 2007).

Only a few studies have assessed excessive detail, with some showing negative associations with child adjustment (e.g., metabolic control in children and adolescents with diabetes; Liakopoulou et al., 2001), and others finding no significant relations with behavior problems (McCarty & Weisz, 2002; Silk et al., 2009).

Joining the mixed evidence regarding relations between EOI and child behavior problems, efforts to identify family determinants of parental EOI, such as parental psychopathology and stress, have yielded inconsistent findings. EOI has been associated with elevated rates of maternal psychopathology (Goodman, Adamson, Riniti, & Cole, 1994; Stubbe et al., 1993) and stress (Boger, Tompson, Briggs-Gowan, Pavlis, & Carter, 2008) in some studies, but not in others (Baker et al., 2000; Rogosch, Cicchetti, & Toth, 2004; Sullivan & Miklowitz, 2010). Likewise, whereas studies of adult schizophrenic patients have documented higher rates of EOI among single mothers (e.g., Parker & Johnson, 1987) albeit not uniformly (e.g., Mueser et al., 1993), those utilizing younger child samples have not found significant associations (Asarnow et al., 1994; Boger et al., 2008; Hirshfeld et al., 1997; Stubbe et al., 1993; Wamboldt et al., 2000). Although the majority of studies have not detected associations between EOI and SES (e.g., Baker et al., 2000; Hirshfeld et al., 1997; Stubbe et al., 1993), some suggest this may be related to the restricted ranges of SES in extant work (Boger et al., 2008). Finally, although some work suggests that maternal age is related to more Positive Remarks (St Jonn-Seed & Weiss, 2002) and negatively related to relevant constructs, such as boundary dissolution

(e.g., Shaffer & Egeland, 2011), most studies examining associations between maternal age and EOI have not found significant associations (e.g., Stubbe et al., 1993; Wamboldt et al., 2000). In light of these varied findings, and to strengthen our inferences about the contribution of EOI criteria to child behavior problems, we examined relations of maternal psychopathology, maternal stress, single mother status, SES, and maternal age with EOI criteria.

Finally, in a novel contribution to this literature, we examined the potential for EOI to exert differential effects by child gender or maternal race/ethnicity. Some work suggests boys and girls may be differentially affected by features of the family environment with some studies showing that boys may be more sensitive to the quality of mother-child interactions than girls (Egeland & Farber, 1984; Sroufe & Egeland, 1991), but others suggesting that girls may be more sensitive to relational features, including intrusive and enmeshed caregiving (Carlson et al., 1995; Jacobvitz & Sroufe, 1987). Likewise, prior studies suggest that facets of the parent-child relationship may have different meanings across racial/ethnic groups. In this view, permeable parent-child relations and intrusion (i.e., the core features of EOI) may be more problematic in cultures that value autonomy and separateness (e.g., Carlson et al., 1995), whereas these same features may connote positive parenting in cultures that value interdependence and communality (e.g., Markus & Kitayama, 1991). Given the value placed on family cohesion and attachment in Hispanic/Latino cultures (Sabogal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987), statements reflecting enmeshment and/or intrusiveness may indicate normative and adaptive family relations in these groups and may be less

strongly associated with child behavior problems relative to other racial/ethnic groups. However, some findings suggest that EOI may be maladaptive even within these Hispanic/Latina groups given its association with higher relapse rates among adult Mexican Americans with schizophrenia in several studies (e.g., Aguilera, López, Breitborde, Kopelowicz, & Zarate, 2010; López et al., 2009).

In sum, this study elucidated the implications of mothers' EOI, which was assessed via FMSS administrations during the preschool period, for understanding changes in children's behavioral adjustment across the transition to first grade. Path analyses evaluated prospective relations of each EOI criterion (i.e., SSOP, emotional display, excessive detail, SOAs, exaggerated praise) with changes in observer-rated externalizing and internalizing behavior problems from the preschool period to first grade. Moreover, we evaluated these relations in consideration of potential contextual influences on EOI and/or child behavior problems (i.e., maternal psychopathology, maternal stress, single mother status, and SES), as well as possible moderating effects of child gender and/or maternal race/ethnicity on these relations. First, we hypothesized that SSOP and emotional display would be associated with increased child behavior problems. Second, we explored relations of excessive detail and SOAs with child behavior problems given these associations were not significant in the only studies to examine these EOI facets independently thus far (McCarty & Weisz, 2002; Silk et al, 2009). Third, we hypothesized that exaggerated praise would be associated with decreased child behavior problems. Fourth, we explored these relations among boys

versus girls, and among non-Hispanic/Latinas versus Hispanic/Latinas in light of the mixed evidence to date.

Method

Participants

The current sample was drawn from an ongoing study of 250 preschooler-caregiver dyads that were recruited via community-based child development centers and preschools. Caregivers completed a brief intake screening by phone before scheduling a 3-hour laboratory assessment. Exclusionary criteria included children with diagnosed developmental disabilities and delays (n = 3), children who did not understand English (n = 4), and children outside the age range of 45-54 months (not tracked). These analyses excluded dyads if they were not biological mother-child dyads at Waves 1 (n = 22, 8.80%) or 2 (n = 3, 1.20%), or the FMSS was invalidated by administration errors (n = 2, .80%). The remaining 223 mothers were Hispanic/Latina (56.50%), White/European-American (20.18%), Black/African-American (17.49%), Asian American (1.79%), or multiracial/other (4.04%) and representative of the surrounding community (U.S. Census Bureau, 2011). At Wave 1, the majority of mothers were in a committed relationship (81.17%), but maternal education was variable (i.e., 19.28% had not completed high school, 12.11% had completed college), as was family income, with 36.77% in poverty per U.S. Census Bureau guidelines (2012), and an additional 30.94% receiving some form of public assistance. Children averaged 49.08 months (SD = 2.91) at Wave 1 (47.98% female).

Procedure

At Wave 1, dyads participated in a 3-hr laboratory assessment during which mothers completed the FMSS and self-report measures, and examiners observed child behavior problems while the child completed measures of intelligence, representation, and regulation in an adjacent room. Follow-up observations of behavior problems were completed for 193 children (86.55% retention) two years later (M_{age_W2} = 73.34 months; *SD* = 2.55) during a similar 3-hour laboratory assessment. Returning dyads did not differ from those who did not, except that returning mothers were older t (221) = 2.52, p = .012. Informed consent was obtained from the biological mother at each wave. All procedures were approved by the research board of the participating university.

Measures

Maternal EOI. Mothers were audio-recorded during a Five-Minute Speech Sample (FMSS) about what kind of a person their child is and how the two of them get along (Magaña-Amato, 1993). The FMSS of seven (3.14%) mothers who responded in Spanish were translated to English for coding and reverse-translated by two native Spanish speakers. Each FMSS transcript was rated by 3-6 coders who were blind to other information about the mother and child. Disagreements between coders were resolved through discussion until consensus was reached. Coders were trained to reliability (i.e., 85% agreement) by Wamboldt and colleagues using scoring procedures they adapted from Magaña-Amato (1993; Wamboldt et al., 2000). A random subset of 48 cases was double-coded by a separate group of 3-6 coders to check for reliability using Krippendorff's alpha (Hayes & Krippendorff, 2007).

Following prior work (e.g., Rogosch et al., 2004), raters evaluated global EOI on a 3-point scale (*high, borderline, or low*) across the five EOI criteria (Krippendorff's α = .82): a) self-sacrifice/overprotection (SSOP), which was conveyed by statements reflecting attitudes and/or behaviors that are self-sacrificing, overprotective, lack objectivity, or indicate boundary dissolution and scored as "low" (0), "borderline" (1), or "full" (2), α = .78; b) emotional display (e.g., crying during the FMSS), not evident in this sample; c) excessive detail about the child's past without relating it to the present, α = 1.00; d) SOAs, including love or willingness to do anything for the child, coded as "present" or "absent," α = 1.00; and e) exaggerated praise, coded as "present" or "absent" based on the presence of five or more positive remarks (e.g., "she's caring"), α = .83. High global EOI was assigned based on full SSOP or two or more of the following: excessive detail, one or more SOAs, and exaggerated praise. Borderline global EOI was rated if only one of the latter three criteria was present or SSOP was borderline.

Child behavior problems. The Test Observation form (TOF; McConaughy & Achenbach, 2004) is a standardized tool for acquiring examiner ratings of child behavior for ages 2 to 18. Immediately following the laboratory visit at each wave, examiners rated the child across 125 behavioral descriptors using a 4-point scale that ranged from no occurrence of the behavior (0), to very slight or ambiguous occurrence of the behavior (1), to a definite occurrence with mild to moderate intensity and frequency and less than three minutes total duration (2), to a definite occurrence with severe high intensity, high frequency, or three or more minutes total duration (3). Examiners coded child behavior across three hours of observation, during which the child faced various emotionally and

cognitively challenging tasks, including tests of IQ, delay of gratification, inhibitory control, and self-concept. The broadband externalizing problems (e.g., "defiant, talks back, or sarcastic," "resistant or refuses to comply") and internalizing problems (e.g., "nervous, high-strung, or tense," "withdrawn, doesn't get involved with examiner") raw scores were used in analyses. TOF scores are scaled with respect to child age and gender with a *t* score ≥ 63 connoting clinically significant problems (McConaughy & Achenbach, 2004). Clinically elevated externalizing problems were observed in 33.3% and 38.4% of the current sample at Waves 1 and 2, respectively, and clinically elevated internalizing problems were observed in 41.1% and 35.8% of the current sample at Waves 1 and 2, respectively.

Raters were doctoral and bachelor-level examiners trained and supervised by the second author. Although not available from the single rater data in this study, McConaughy and Achenbach (2004) reported interrater reliabilities of r = .78 and .43 for the externalizing and internalizing behavior scores, respectively, and test-retest reliabilities of r = .83 for both scales. The TOF was validated in a diverse sample, and has since been used in other ethnoracially diverse samples (Marcelo & Yates, 2014; Rettew, Stanger, McKee, Doyle, & Hudziak, 2006).

Child intelligence. The Vocabulary and Block Design subtests of the Wechsler Preschool and Primary Scale of Intelligence-III were administered at Wave 1 to yield an abbreviated assessment of child IQ (Wechsler, 2002).

Maternal psychopathology. The Brief Symptom Inventory (BSI; Derogatis, 1993) evaluated mothers' psychopathology during the week preceding the Wave 1 interview.

Participants indicated how much 53 symptoms (e.g., "feeling lonely") bothered them on a 5-point likert scale from *not at all* (0) to *extremely* (4). The BSI is an abbreviated form of the Symptom Checklist 90—Revised (Derogatis, 1983) with acceptable reliability in clinical and community populations (Boulet & Boss, 1991; Derogatis & Melisaratos, 1983), diverse racial/ethnic groups (Hoe & Brekke, 2009), and in this sample (α = .94). Clinical elevations in maternal psychopathology (i.e., global severity index *t* score $\geq$ 63) were observed in 14.16% of this sample at Wave 1.

Maternal stress. Mothers reported on their exposure to Stressful Life Events during the Wave 1 assessment using a list of 19 items from the widely-used Parent Stress Index (Abidin, 1995). Participants were asked if an array of events (e.g., divorce, death, change in finances) had occurred in the immediate family during the preceding 12 months. If the mother endorsed "yes," she was asked to rate how much of an effect it had on her using a 5-point likert scale ranging from an *extremely positive* (1) to an *extremely negative* (5) impact (Sarason, Johnson, & Siegel, 1978). Scores were recoded from extremely negative (*2*) to neutral (*0*) to extremely positive (-*2*) values and composited to yield an index of maternal stress.

Family socioeconomic status. Hollingshead's (1975) Four-Factor Index of Social Status evaluated SES based on caregivers' education and occupation. Scores ranged from "unemployed with a 10th grade education" (9) to "an attorney with a graduate degree" (66) with higher scores connoting higher SES (M_{SES} = 31.95; *SD* = 12.31; e.g., a licensed vocational nurse).

*Maternal receptive vocabulary***.** Maternal receptive vocabulary was assessed with the Shipley-Hartford Institute of Living Scale (SILS) vocabulary subscale (Shipley, 1940). The SILS assesses intellectual ability, and has been employed in samples with Black/African-American and Hispanic/Latino adults (Bowers & Pantle, 1998). Mothers circled a word with the same meaning as a target word from four options. Correct answers were summed over 40 items.

Data Analytic Plan

Data preparation and missingness. The rate of missing cases ranged across variables with a mean of 6.88% (*SD* = 6.38). Of the 223 dyads, four children at Wave 1 and 33 children at Wave 2 were missing examiner-reported child behavior problems, 14 mothers were missing vocabulary scores, and four mothers were missing Wave 1 psychopathology data. All available data on the 223 participants were included in analyses using maximum likelihood estimation with robust standard errors (Schafer & Graham, 2002).

A multivariate analysis of variance (ANOVA) tested mean differences in child age and IQ, maternal age, SES, psychopathology, stress, and vocabulary, and child externalizing and internalizing problems at Waves 1 and 2 as a function of child gender and maternal race/ethnicity. Chi-square analyses evaluated group differences in single mother status, SSOP, excessive detail, SOAs, and exaggerated praise. Bivariate relations informed the selection of covariates for path analyses to evaluate if and how EOI criteria predicted changes in child behavior problems. Predictors were measured at Wave 1 and centered to minimize collinearity.

Model evaluation and multigroup comparisons. Model evaluation and comparison of nested path analytic models were examined using Mplus version 6.1 (Muthén & Muthén, 2010). Absolute model fit was evaluated with the comparative fit index (CFI; > 0.90), the Tucker–Lewis index (TLI; > 0.90), and the root mean square error of approximation (< 0.08). Failure to meet these criteria on one or more fit indices was interpreted as poor model fit. Path analyses evaluated associations between EOI criteria and change in child externalizing and internalizing behavior problems from preschool to first grade. We specified a model including stability paths over time for each dependent variable (e.g., regressing externalizing at Wave 2 on externalizing at Wave 1), and prospective paths between salient covariates (i.e., child IQ, single mother status, family SES, maternal stress) and Wave 2 externalizing and internalizing problems, as well as between EOI criteria and Wave 2 externalizing and internalizing problems. Multiple group comparisons tested the invariance of observed pathways as a function of child gender and maternal race/ethnicity using a scaling constant, c coefficient, to evaluate chi-square difference tests between models with constrained and unconstrained paths between groups (i.e., boys vs. girls; Hispanic/Latina vs. non-Hispanic/Latina; Satorra, 2000). When the chi-square difference test was significant, we selected the less parsimonious (i.e., unconstrained) model, allowing the paths to differ between groups (i.e. moderation).

Results

Descriptive statistics

A multivariate ANOVA indicated no significant main effects for child gender (Wilks' λ= .970, p = .936) or maternal race/ethnicity (Wilks' λ = .771, p = .126), nor for their interaction (Wilks' λ = .820, p = .491) across child age, child IQ, maternal age, family SES, maternal psychopathology, maternal stress, maternal vocabulary, and externalizing and internalizing problems at Waves 1 and 2. Chi-square analyses indicated that mothers of boys expressed higher levels of SSOP than mothers of girls, χ^2 (2) = 9.31, p = .010, and endorsed more SOAs than mothers of girls, χ^2 (1) = 9.95, p = .002, however, mothers of girls expressed more excessive detail than mothers of boys, χ^2 (1) = 5.19, p = .023 (see Table 1).

Continuous ratings of global EOI as high (21.52%), borderline (27.80%), or low (50.67%) were derived from SSOP scores (16.14% of FMSS were rated as full SSOP, 4.93% as borderline, and 78.92% as absent), excessive detail (present in 3.59% of FMSS), SOAs (present in 13.00% of FMSS), and exaggerated praise (present in 29.15% of FMSS; see Table 2).

Bivariate Relations

As shown in Table 1, child IQ was related to lower SSOP, and fewer externalizing and internalizing problems at Waves 1 and 2. Single mother status was positively associated with SOAs and with higher levels of child externalizing problems at Wave 2. Family SES was negatively associated with SOAs, exaggerated praise, and externalizing and internalizing problems at Wave 2. Maternal stress was negatively associated with

exaggerated praise. Relations among EOI criteria were not significant. SSOP was positively related to externalizing at Waves 1 and 2, whereas SOAs were positively related to externalizing at Wave 2. Neither excessive detail, nor exaggerated praise was associated with behavior problems at either wave.

Path Analyses

Model 1 evaluated the effects of each EOI criterion on change in externalizing and internalizing behavior problems from preschool to first grade while accounting for covariates related to EOI and/or child behavior problems, including child IQ, single mother status, family SES, maternal stress, and Wave 1 externalizing and internalizing problems. Child age, maternal age, maternal vocabulary, and psychopathology were not related to the study variables, and were omitted from further analyses. We evaluated EOI criteria simultaneously to account for co-occurring criteria that could suppress or augment other effects.

Model fit indexes are shown in Table 3. The hypothesized model (Model 1) evidenced poor fit to the data as indicated by the chi-square test, and low CFI and TLI values. The revised model (Model 2) omitted internalizing problems given the absence of significant relations with EOI criteria, but the model fit remained poor, albeit improved over model 1. Model 3 trimmed nonsignificant paths to Wave 2 externalizing problems, including child IQ, single mother status, maternal stress, excessive detail, and exaggerated praise, yielding modest fit. Model 4 applied suggested modifications produced by Mplus, including two theoretically defensible covariance terms: (a) SES with Wave 1 externalizing and (b) SSOP with Wave 1 externalizing. This final model

evidenced good fit and explained 23.9% of the variance in externalizing behavior problems at Wave 2 (see Figure 1). Externalizing behavior problems evidenced significant stability over time. Externalizing at Wave 1 was negatively associated with family SES and marginally associated with more SSOP. Family SES predicted a decrease in externalizing problems. SSOP and SOAs predicted increased externalizing behavior problems.

Invariance analyses

Child gender. The final model with unconstrained paths by gender (Model 5) was compared to a fully constrained model (Model 5.1) with all paths fixed to equality between boys and girls, yielding a significant decrease in model fit as a function of the equality constraints, $\Delta\chi^2$ (6) = 14.39, p = .026. To identify moderated paths, five models were estimated in which the exogenous covariances (Model 5.2), stability of externalizing (Model 5.3), or the effects of family SES (Model 5.4), SSOP (Model 5.5), or SOAs (Model 5.6) on externalizing at Wave 2 were constrained (see Table 3). Only constraining the path from SOAs to Wave 2 externalizing problems yielded a significant decline in model fit, $\Delta\chi^2$ (1) = 9.34, p = .002, indicating a significant effect for boys (β = .446, p < .001) but not for girls (β = -.021, p = .776).

Maternal race/ethnicity. A comparison of fit between a model with unconstrained parameters across Hispanic/Latina and non-Hispanic/Latina mothers (Model 6), and a model with fully fixed parameters (Model 6.1) was not significant, $\Delta\chi^2$ (6) = 4.09, p = .664 (see Table 3).

Discussion

The findings of the current study support prior suggestions that EOI is not a cohesive construct for research and practice with young children (McCarty & Weisz, 2002; Psychogiou et al., 2007; Wamboldt et al., 2000), and clarify the developmental implications of specific EOI criteria for understanding children's behavioral adjustment. Significant predictive relations emerged between SSOP and SOAs (but not exaggerated praise and excessive detail) with increases in children's externalizing problems from preschool to first grade. However, EOI criteria were not related to changes in children's internalizing behavior problems. Observed relations were largely consistent across boys and girls, and did not significantly differ between Hispanic/Latina and non-Hispanic/Latina mothers.

Parental expressions of SSOP encompass enmeshing or controlling attitudes about the parent-child relationship that likely guide parenting patterns that overtax (Jacobvitz & Sroufe, 1987) and/or fail to support (Carlson et al., 1995) children's emergent capacities to modulate arousal. Deficits in emotion and behavior regulation abilities may contribute to increased child behavior problems amidst growing demands for self-regulation during the transition to formal school. Whereas most studies that examined SSOP did so with exclusive attention to internalizing problems (e.g., Gar & Hudson, 2008; Silk et al., 2009), the present study examined both internalizing and externalizing behavior problems in a longitudinal design, yielding important evidence that SSOP may be relevant to growth in externalizing behavior problems. Regarding SOAs, prior studies have either failed to detect effects (McCarty & Weisz, 2002; Silk et al., 2009), or have documented

concurrent relations with fewer behavior problems when combining SOAs with exaggerated praise to yield a global index of positivity (Psychogiou et al., 2007). The current study is among the few to examine SOAs independently and prospectively, yielding evidence that SOAs may have negative implications for children's externalizing problems, despite prior assumptions that SOAs are proxies for global positivity. Importantly, SOAs may capture sentiments of warmth and affection (e.g., "I love my daughter") or overwhelming expressions (e.g., "I love him to death. He's my everything.") that may burden the child or interfere with the child's normative bids for autonomy. Future research may benefit from revised coding of SOAs to account for this distinction.

Other EOI criteria were not associated with changes in externalizing problems, despite our expectation that exaggerated praise would predict decreased child behavior problems over time given its negative concurrent relations with behavior problems in extant work (McCarty & Weisz, 2002; Psychogiou et al., 2007; Wamboldt et al., 2000). This may be related to our use of examiner rather than maternal reports as mothers whose narratives contain exaggerated praise may idealize their children and consequently under-report behavior problems, whereas observers may be less biased in their assessments. As suggested by prior cross-sectional findings (McCarty & Weisz, 2002), excessive detail was not associated with changes in externalizing problems. Finally, as emotional display was not evident in this sample, and is generally very low base-rate (e.g., Gar & Hudson, 2008; Wamboldt et al., 2000), its significance awaits further consideration.

None of the EOI criteria were related to changes in children's internalizing behavior problems. Although studies have not yet examined relations between most EOI criteria and internalizing problems, the absence of significant relations between SSOP and internalizing problems within and across time was surprising given its association with child anxiety in cross-sectional studies with clinical samples (Gar & Hudson, 2008; Hirshfeld et al., 1997). Our use of observer reports rather than maternal reports, child reports, or structured clinical interviews may have limited the specificity of our assessment of internalizing behavior problems. Indeed, prior studies showing significant associations of SSOP with internalizing symptoms among young children utilized clinician ratings based upon structured clinical interviews with the primary caregiver (Gar & Hudson, 2008; Hirshfeld et al., 1997; Stubbe et al., 1993). In addition, although examiner reports minimize the risk of shared method variance, the TOF may be a stronger indicator of readily observable behaviors that typify externalizing than internalizing problems.

This study further extended the literature by exploring potential differences in the significance of EOI criteria for development as a function of child gender and maternal race/ethnicity. SOAs emerged as a significant predictor of increased externalizing problems for boys, but not for girls. As discussed earlier, this pattern is consistent with prior evidence that boys may be especially sensitive to the quality of the parent-child relationship (Egeland & Farber, 1984; Sroufe & Egeland, 1991). Alternately, the quality of mothers' SOAs may vary between boys and girls with more overwhelming expressions regarding sons than daughters. Interestingly, mothers of boys expressed more SSOP and

SOAs than mothers of girls. Findings pointing to differences in the rates and/or significance of SSOP and SOAs by gender highlight the need for additional research on the etiology, form, and function of these constructs in early development.

Observed relations of SSOP and SOAs to change in children's externalizing behavior problems did not vary across Hispanic/Latina and non-Hispanic/Latina mothers. Unfortunately, the current sample size necessitated our categorization of both Black/African American and White/European American mothers as non-Hispanic/Latina. In light of evidence suggesting that the relational dynamics indexed by these constructs may be normative within Black/African-American families given the value placed on close family ties and parent-child mutuality (McAdoo & Younge, 2009), the inclusion of Black/African-American mothers in the comparison group may have occluded meaningful differences between Hispanic/Latina and White/European-American mothers. Moreover, within the subsample of Hispanic/Latina mothers, differences in acculturation may have influenced the quality or impact of SSOP or SOAs on child behavior and adjustment, as prior studies with adult children have suggested (e.g., Aguilera et al., 2010).

These findings have important implications for future research on EE with young children. First, investigations of EE should consider EOI criteria as individual, orthogonal influences on child behavior, especially with regard to externalizing problems. Second, there is a need to examine gender differences in the salience of EOI criteria as they may evidence qualitative differences across mothers' parenting of sons versus daughters. Third, multi-wave longitudinal research is needed to explicate causal relations among

EOI and child behavior problems. Although our findings offer preliminary support for a parent-effect model of EOI, the transactional nature of development necessitates extended designs that consider child effects. Fourth, although a core tenet of the EE model is that attitudes expressed by a parent about their child guide parenting behavior, few studies have assessed whether SSOP and SOAs are associated with theoretically relevant parenting behaviors (e.g., intrusiveness, enmeshment, role reversal). Therefore, future studies may benefit from exploring these constructs during observed parent-child interactions to elucidate the mechanisms that underlie the effects of SSOP and SOAs on child adjustment. Fifth, further research is needed to clarify if and how the expression and significance of EOI criteria may vary across clinical and community samples in which rates of child behavior problems and/or parental distress and dysfunction may influence the prevalence and/or effects of these constructs. Finally, the use of independent examiners' reports of child adaptation is both a strength and limitation of this study as internalizing symptoms may be best assessed across multiple informants. Likewise, although single-examiner reports are widely used in research (e.g., Martel, Gremillion, & Tackett, 2014), the inclusion of multiple observational reports would have permitted additional reliability analyses.

In addition to its generativity for future research, this investigation supports the value of the FMSS as a tool to identify parent-child dynamics that influence the growth of externalizing problems in early development. In particular, our study highlights the need for parent-focused practices to redress problematic attitudes and behaviors indexed

by SSOP and SOAs, which potentially undermine effective parenting, to prevent the early onset and/or exacerbation of child externalizing behavior problems.

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Table 1

Descriptive and Bivariate Statistics for EOI Criteria, Child Behavior Problems, and Covariates

	1	2	3	4	5	6	7	8	9	10	11
1. Child age (months)	--										
2. Child IQ	-.05	--									
3. Maternal age (years)	.04	.26**	--								
4. Maternal vocabulary	-.08	.26**	.11	--							
5. Single mother status	.11	-.08	-.03	-.09	--						
6. Family SES	-.05	.31**	.18**	.38**	-.14*	--					
7. Maternal psych.	-.10	.02	.04	.05	.05	-.07	--				
8. Maternal stress	-.04	-.04	.14*	-.03	.19**	-.08	.30**	--			
9. SSOP	.06	-.15*	-.03	-.09	.10	-.05	.07	.03	--		
10. Excessive detail	.09	.00	-.09	-.03	-.03	-.02	-.07	-.03	.03	--	
11. SOAs	.09	-.03	.04	-.05	.19**	-.14*	-.09	-.04	.08	-.08	--
12. Exaggerated praise	.07	.06	-.08	-.02	.07	-.13*	-.09	-.15*	.08	-.02	.10
13. Externalizing W1	-.09	-.19**	-.09	-.04	.07	-.13	.10	-.05	.14*	-.08	.03
14. Internalizing W1	-.02	-.24**	-.12	-.03	.06	-.11	.06	-.08	.07	.06	-.07
15. Externalizing W2	.04	-.22**	-.01	-.07	.24**	-.25**	.10	-.01	.27**	-.06	.35**
16. Internalizing W2	.13	-.14*	-.11	-.14	.01	-.20**	-.01	.06	.13	.13	.01
Mean/%	49.08	95.41	30.51	24.76	18.83%	31.95	48.51	-1.08	.37	3.59%	13.00%
SD	2.91	13.64	6.00	5.02	--	12.31	11.06	3.53	.75	--	--

Table 1
Continued

	12	13	14	15	16
1. Child age (months)					
2. Child IQ					
3. Maternal age (years)					
4. Maternal vocabulary					
5. Single mother status					
6. Family SES					
7. Maternal psych.					
8. Maternal stress					
9. SSOP					
10. Excessive detail					
11. SOAs					
12. Exaggerated praise	--				
13. Externalizing W1	.08	--			
14. Internalizing W1	-.01	.34**	--		
15. Externalizing W2	.10	.32**	.01	--	
16. Internalizing W2	.00	-.08	.17*	.02	--
Mean/%	29.15%	16.91	8.61	10.73	4.42
SD	--	18.07	9.08	12.49	5.02

Note: Single mother status: 0 = partnered, 1 = single; Maternal psych. = maternal psychopathology; SSOP = self-sacrifice/overprotection; SOAs = statements of attitude (0 = absent, 1 = present); W1 = Wave 1, W2 = Wave 2.
*$p < .05$; **$p < .01$

Table 2
Combinations of EOI Criteria by EOI Rating

EOI Rating	EOI Criteria Combination	% (n) within total sample	% (n) within EOI Rating
High		21.52% (48)	
	Full SSOP		35.42% (17)
	Full SSOP and exaggerated praise		20.83% (10)
	≥1 SOAs and exaggerated praise		18.75% (9)
	Full SSOP and ≥ 1 SOAs		10.42% (5)
	Full SSOP, exaggerated praise, and ≥ 1 SOAs		6.25% (3)
	Full SSOP and excessive detail		4.17% (2)
	Exaggerated praise and excessive detail		4.17% (2)
Borderline		27.80% (62)	
	Exaggerated praise		58.06% (36)
	≥ 1 SOAs		19.35% (12)
	Borderline SSOP and exaggerated praise		8.06% (5)
	Borderline SSOP		8.06% (5)
	Excessive detail		6.45% (4)
Low		50.67% (113)	

Note. SSOP = self-sacrifice/overprotection; SOAs = statements of attitude.

Table 3

Fit Statistics for Path Analyses Showing Associations of EOI Criteria with Child Behavior Problems

Model	Description	χ^2	*df*	*p*	$\Delta\chi^2$	Δdf	*p*	RMSEA	CFI	TLI
1	Initial model – EXT & INT	37.88	18	.004	--	--	--	.070	.714	.666
2	EXT only	16.80	8	.032	--	--	--	.070	.840	.820
3	EXT only – trimmed ns covariates	7.92	3	.048	--	--	--	.086	.892	.856
4	EXT only – added covariances[a]	5.91	4	.206	--	--	--	.046	.958	.958
5	Final model freed by gender	6.93	8	.545	--	--	--	.000	1.000	1.019
5.1	Final model constrained by gender	21.81	14	.083	14.39	6	.026	.071	.859	.919
5.2	Gender constrained covariances	10.95	10	.362	3.93	2	.140	.029	.983	.986
5.3	Gender constrained stability	7.30	9	.606	0.42	1	.519	.000	1.000	1.027
5.4	Gender constrained SES → EXT W2	7.01	9	.637	0.06	1	.808	.000	1.000	1.032
5.5	Gender constrained SSOP → EXT W2	7.22	9	.614	0.40	1	.525	.000	1.000	1.029
5.6	Gender constrained SOAs → EXT W2	17.33	9	.044	9.34	1	.002	.091	.849	.866
6	Final model freed by Latina	13.34	8	.101	--	--	--	.077	.892	.892
6.1	Final model constrained by Latina	16.65	14	.275	4.09	6	.664	.041	.946	.969

Note.df = degrees of freedom; RMSEA = root mean square error of approximation; CI = confidence interval; CFI = comparative fit index; TLI = Tucker-Lewis Index; EXT = externalizing; INT = internalizing; SES = socioeconomic status; W1 = Wave 1; W2 = Wave 2; SSOP = self-sacrifice/overprotection; SOAs = statements of attitude.

[a] Additional covariances included (a) SES with EXT W1, and (b) SSOP with EXT W1.

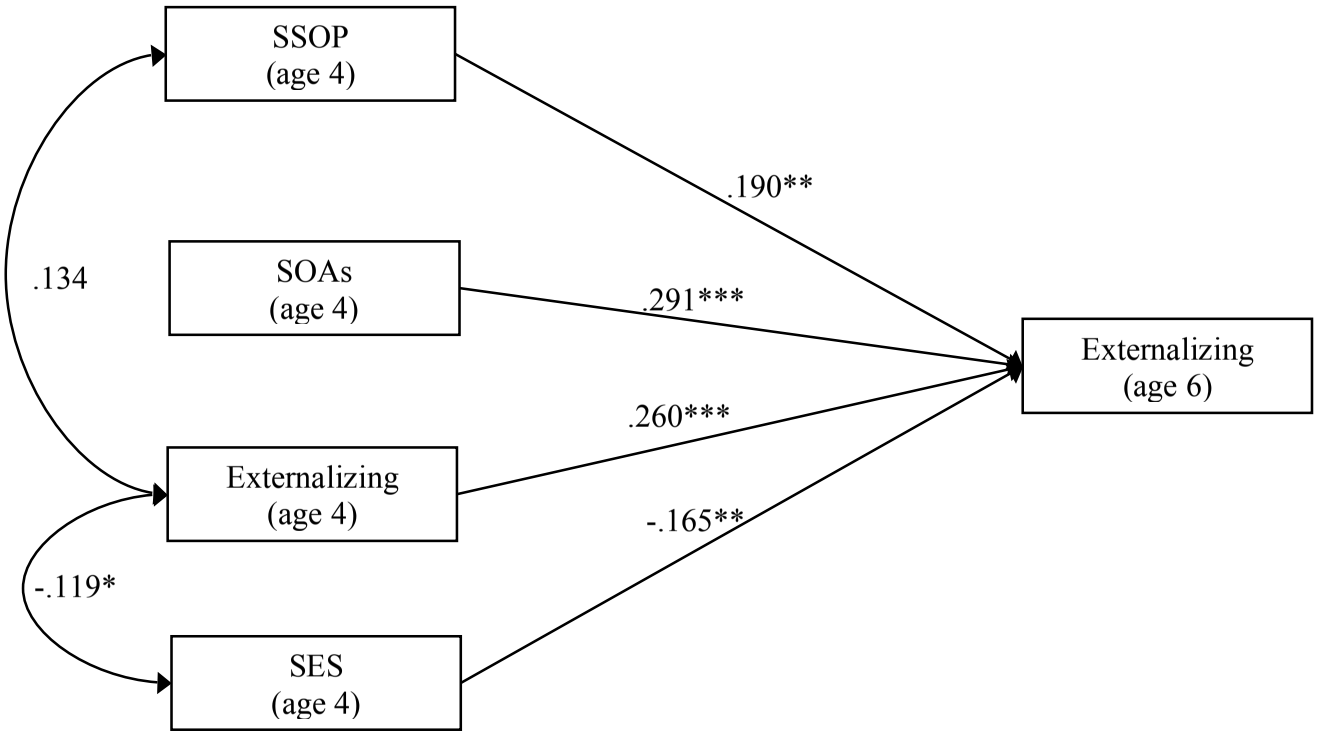

Figure 1. Standardized path coefficients in the final model (Model 4) showing prospective associations of EOI criteria with child externalizing problems.
Note. SSOP = self-sacrifice/overprotection; SOAs = statements of attitude; W1 = Wave 1; W2 = Wave 2.
*$p < .05$; **$p < .01$; ***$p < .001$

CHAPTER 3 - PROSPECTIVE ASSOCIATIONS BETWEEN MATERNAL SELF-SACRIFICE/OVERPROTECTION AND CHILD ADJUSTMENT: MEDIATION BY INSENSITIVE PARENTING

Abstract

Prior research on Expressed Emotion (EE) in parents' Five Minute Speech Samples (FMSS) suggests that the emotional overinvolvement criterion of self-sacrifice/overprotection (SSOP; i.e., attitudes and/or behaviors that are overprotective or blur boundaries between the parent and child) is a valid index of problematic parenting attitudes that is associated with increased child behavior problems. However, this study was the first to assess a core assumption of the EE literature, which is that parenting quality accounts for these relations. Path analysis drew on a longitudinal study of a community sample of 223 child-mother dyads (47.9% female; M_{age_W1} = 49.08 months; 56.5% Hispanic/Latina) to test whether observed maternal insensitivity (i.e., low support, high intrusion, high hostility) at age 6 mediated links between mothers' SSOP about their preschool-aged child and child internalizing and attention/hyperactivity problems at age 8. Results indicated that (a) SSOP at age 4 predicted higher levels of maternal insensitivity at age 6; (b) maternal insensitivity predicted higher levels of internalizing (but not attention/hyperactivity) problems at age 8; and (c) SSOP exerted a significant indirect effect, via maternal insensitivity, on internalizing problems, but only a direct effect on attention/hyperactivity problems. In addition, invariance analyses indicated that these relations did not differ significantly across groups as a function of child gender, maternal race/ethnicity, and single mother status. These results suggest that FMSS

evaluations of SSOP may offer a cost-effective, culturally valid, and clinically valuable screening tool for the detection of pathological parental attitudes that may confer elevated risks for insensitive parenting practices and/or child adjustment difficulties.

Prospective Associations between Maternal Self-sacrifice/overprotection and Child Adjustment: Mediation by Insensitive Parenting

Family relationships and patterns of interaction play a central role in the development of childhood behavior problems in both internalizing and externalizing domains (Patterson, DeBaryshe, & Ramsey, 1989; Stubbe, Zahner, Goldstein, & Leckman, 1993). In particular, the emotional climate of the family plays a fundamental role in shaping children's developmental trajectories. Emotion processes in the family are especially salient in early childhood, when children spend the majority of their time in the family milieu and are far more dependent on their parents for socialization, nurturance, and guidance (Campbell, 1995), whereas peers take on increasing salience in later childhood and adolescence (Sroufe, Egeland, & Carlson, 1999). The sensitivity of young children to parenting influences is further magnified by the organizational nature of development wherein early experience sets the stage for later adaptations such that a prior disturbance in the parent-child relationship may undermine a child's ability to successfully negotiate subsequent developmental challenges (Sroufe & Rutter, 1984; Sroufe, 1990). Relational disturbances early in development are of particular concern as toddlerhood and the preschool years constitute important periods of development during which children internalize their beliefs and expectations about others (Bretherton & Munholland, 1999) and acquire independent self-regulation skills (Calkins, Blandon, Williford, & Keane, 2007; Calkins & Leerkes, 2011; Posner & Rothbart, 2000). Thus, the present investigation focused on the early childhood years as a period of particular

importance for understanding and potentially modifying family emotion processes to support child development.

Expressed emotion (EE) is one component of the family emotional climate that has garnered increasing attention in families with young children. Alternately characterized as the "emotional temperature of the household" (Vaughn, 1989), or "the 'blood pressure' of family life" (Kuipers, 1992), EE is often assessed using a Five Minute Speech Sample (FMSS; Magaña et al., 1986) to obtain parents' verbal narratives about their child and the parent-child relationship. As expressed in these narratives, EE refers to parents' expressed criticism (i.e., dislike or disapproval) of the child and/or their emotional overinvolvement (EOI), which is based on heterogeneous criteria (e.g., excessive worry/concern, self-sacrifice, exaggerated praise) that are thought to reflect enmeshed parent-child relationships. The attitudes expressed by a parent about their child during these narrative assessments are thought to influence parenting behavior, with consequent implications for child adjustment (Chambless, Bryan, Aiken, Steketee, & Hooley, 1999).

Although the concept of EE originated in studies of *adult* psychiatric patients and their caregivers (Brown & Rutter, 1966), it has been applied to the study of parent-child relationships with young children more recently (e.g., Baker, Heller, & Henker, 2000). A substantial body of work has demonstrated consistent associations of overall EE status (high or low EE based on criticism and/or EOI) with a broad array of child behavior problems and psychiatric diagnoses. However, whereas criticism is a robust predictor of adjustment across both broadband internalizing and externalizing symptoms (e.g., Baker

et al., 2000; McCarty & Weisz, 2002; Wamboldt, O'Connor, Wamboldt, Gavin, & Klinnert, 2000), relations between EOI and child adjustment are less consistent. Some studies found associations between parents' EOI and child anxiety (e.g., Hirshfeld, Biederman, Brody, Faraone, & Rosenbaum, 1997; Stubbe et al., 1993), and two studies documented elevated rates of EOI among parents with depressed children (Asarnow, Tompson, Hamilton, Goldstein, & Guthrie, 1994; Asarnow, Tompson, Woo, & Cantwell, 2001), yet most studies have not found significant relations between EOI and children's adjustment (e.g., Baker et al., 2000; McCarty & Weisz, 2002; Wamboldt et al., 2000). Because the ongoing lack of clarity regarding relations between EOI and adjustment in young children may be due to the heterogeneity of the EOI construct, some researchers have evaluated each EOI criterion-adjustment relation separately (e.g., Khafi, Yates, & Sher-Censor, in press; McCarty & Weisz, 2002).

Most studies that have investigated the relation of individual components of EOI to measures of adjustment in samples of both adult and young children, including Magaña and colleagues' (1986) original work, have found that the EOI criterion of self-sacrifice/overprotection (SSOP) is more strongly (or more consistently) related to negative adjustment outcomes than other EOI criteria (e.g., exaggerated praise of the child, statements of love or devotion to the child). SSOP is scored on the basis of statements reflecting attitudes and/or behaviors that are overprotective, self-sacrificing, lack objectivity, or indicate a blurring or dissolution of boundaries between the caregiver and her/his child (e.g., "Well, when she gets a cold. Ah, well I'm crying there with her

and for her not to get sick;" "I'm concerned for him that he might starve for my attention").

Cross-sectional findings suggest that SSOP is positively associated with externalizing and internalizing problems (McCarty & Weisz, 2002), and the first study in this dissertation extended this over time to demonstrate prospective associations between SSOP and increases in externalizing behavior problems from preschool to first grade (Khafi, Yates, & Sher-Censor, in press). Moreover, higher rates of SSOP have been found among mothers of anxious children relative to mothers of comparison children (Gar & Hudson, 2008), and among mothers of behaviorally inhibited preschool children compared to behaviorally uninhibited children (Raishevich, Kennedy, & Rapee, 2010). In addition, in a study of adolescents, a revised FMSS EOI rating that was based heavily on SSOP was positively related to concomitant youth internalizing problems (Wamboldt et al., 2000). However, in other studies, SSOP did not differentiate between depressed children and controls (Silk et al., 2009), or was entirely absent from parents' FMSS (Kershner, Cohen, & Coyne, 1996). Overall, these findings suggest that SSOP is a central index of EOI in the context of parenting young children, and that SSOP may undermine children's development, presumably via parenting processes.

These empirical findings are supported by theoretical models of boundary dissolution in family relationships, wherein a complex set of phenomena (e.g., enmeshment, intrusiveness, role reversal) degrade the psychological distinctiveness and role separation between the caregiver and child (Kerig, 2005). SSOP may reflect a broader climate of boundary dissolution and/or a disruption in the balance between

parental protectiveness and "letting go" (Lieberman, 1992) that allows the parent to serve as a secure base from which the child can explore, and to which s/he can return when threatened (Bowlby, 1982; Sroufe, Duggal, Weinfield, & Carlson, 2000). In these instances, the parent's inability or unwillingness to support the child's emergent autonomy contributes to problematic parent-child relationships that are characterized by enmeshment, intrusiveness, and role reversal – the very hallmarks of SSOP. At the same time, these dynamics undermine support for the child's development because they may overwhelm the child by imposing excessive demands on her/his immature resources in a way that heightens the child's vulnerability to both internalizing and externalizing problems, particularly symptoms of inattention and hyperactivity (e.g., Carlson, Jacobvitz, & Sroufe, 1995; Egeland, Pianta, & O'Brien, 1993; Macfie, Houts, McElwain, & Cox, 2005).

A core assumption in the EE literature is that the attitudes and feelings expressed by the parent towards the child during the interview are representative of the parent's behaviors toward the child (Chambless et al., 1999). Although this hypothesis has received support in studies of criticism and observed parenting (e.g., McCarty, Lau, Valeri, & Weisz, 2004; Wamboldt et al., 2000), relations between EOI and insensitive parenting practices have not been significant in the few studies to examine this relation (e.g., Cruise, Sheeber, & Tompson, 2011; McCarty et al., 2004). These null findings likely reflect the heterogeneity of the EOI construct itself, though research has not yet evaluated if and how EOI criteria, and SSOP in particular, relate to enmeshed, intrusive, demanding, and/or hostile parenting (i.e., insensitive parenting). In the closest test of the

relevance of SSOP to parenting to date, Wamboldt and colleagues (2000) showed that a revised rating of EOI based largely on SSOP was associated with poorer interpersonal boundaries for both parents and children in the context of observed interactions during adolescence. Focusing on early childhood, the current investigation sought to evaluate hypothesized relations between SSOP and observed indices of insensitive parenting (i.e., poor support, high hostility, high intrusion) in the context of structured interactions between parents and their 6-year-old child as a putative pathway by which SSOP during the preschool period may contribute to later child adjustment as assessed at age 8. Moreover, in contrast, to prior studies of EE in families with young children, which have utilized predominantly Caucasian, middle- to upper-class samples, this investigation employed a diverse community sample to evaluate the potential moderating influence of child gender, parental race/ethnicity, or family structure (e.g., single parent status).

Both the family emotional climate and parenting practices are embedded within a broader sociocultural context that may influence their frequency and/or meaning, yet few studies have evaluated the potential moderating influence of sociodemographic factors on these relations. Evidence regarding gender differences in the influence of parenting on development is mixed, with some studies finding mother-child interaction variables are more predictive of adjustment outcomes for boys than for girls (Egeland & Farber, 1984; Sroufe & Egeland, 1991), and others reporting stronger associations between parenting (e.g., psychological control) and adjustment problems for girls compared to boys (Carter, Garrity-Rokous, Chazan-Cohen, Little, & Briggs-Gowan, 2001). In particular, in a study of the prospective influence of parenting on child adjustment, boys who experienced

enmeshed parenting patterns akin to SSOP evidenced more attention/hyperactivity symptoms, whereas girls later showed symptoms of depression (Jacobvitz, Hazen, Curran, & Hitchens, 2004).

Likewise, although prior studies suggest that facets of the parent-child relationship may have different meanings across racial/ethnic groups, consideration of these issues in studies of EE is lacking. Relative to European American families that value autonomy and separateness (e.g., Carlson et al., 1995), permeable parent-child relations and intrusiveness may reflect more normative aspects of family functioning in African American and Hispanic/Latino families that are more likely to embrace and value parent-child mutuality (Anderson, 1999) and *familism* (Gibbs & Huang, 2003), respectively. However, some findings suggest that enmeshed parent-child relational dynamics may be maladaptive even within non-White groups given evidence of higher relapse rates among adult Mexican Americans with schizophrenia as a function of high levels of family EE (e.g., Aguilera, López, Breitborde, Kopelowicz, & Zarate, 2010; López et al., 2009).

In addition to gender and race/ethnicity, structural features of the family system, such as single-parent status, may be related to the level and/or impact of SSOP and/or to insensitive parenting. Extant work suggests children in divorced and single parent families may be at increased risk for experiencing boundary dissolution (e.g., Peris & Emery, 2005) and compromised parenting quality (e.g., Shaw, Winslow, Owens, & Hood, 1998). Evidence for moderation of parenting effects by family status suggests that hostile parenting is particularly harmful to child wellbeing in single-mother families

relative to two-parent families (Lipman, Boyle, Dooley, & Offord, 2002). Thus, relations among SSOP, parenting quality, and child adjustment may vary by family structure.

Drawing on a longitudinal study of diverse mother-child dyads, the overarching goal of this investigation was to evaluate hypothesized relations of mothers' expressions of SSOP about their 4-year-old child to children's internalizing and externalizing behavior problems at age 8 as mediated by insensitive parenting practices in the context of observed parent-child interactions at age 6. Exploratory analyses further evaluated the moderating influence of child gender, maternal race/ethnicity, and family structure (i.e., single-mother status) on these relations. Together, these aims bridge gaps in the extant literature to advance our understanding of the family emotional climate, parenting, and child adjustment while offering significant implications for practice aimed at modifying problematic parental attitudes and practices.

Method

Participants

The current sample was drawn from an ongoing study of 250 preschooler-caregiver dyads. These analyses focused on assessments across 3 data waves (ages 4, 6, and 8), and excluded dyads if they did not include the biological mother at Waves 1 (n = 22, 8.8%) and 2 (n = 3, 1.2%), or the FMSS was invalidated by administration errors (n = 2, 0.9%). The remaining 223 mothers were Hispanic/Latina (56.5%), White/European-American (20.2%), Black/African-American (17.5%), Asian American (1.8%), or multiracial/other (4.0%), and were representative of the surrounding community (U.S. Census Bureau, 2011). At Wave 1, the majority of mothers were in a committed

relationship (81.2%), but maternal education was variable (i.e., 19.3% had not completed high school, 12.11% had completed college). Family socioeconomic status (SES) was assessed using the Hollingshead (1975) Four-Factor Index yielding an average score of 31.95 (*SD* = 12.31), which corresponds to clerical/sales work. Children (47.9% female) averaged 49.08 months (*SD* = 2.91) at the Wave 1 (age 4) assessment, 73.34 months (*SD* = 2.55) at the Wave 2 (age 6) assessment, and 97.66 months (*SD* = 3.13) at the Wave 3 (age 8) assessment. Of the 223 biological mother-child dyads who completed the Wave 1 assessment, 193 dyads (86.5%) completed the Wave 2 assessment, and 197 (88.3%) completed the Wave 3 assessment (207 dyads, 92.8%, completed two or more assessment waves). Returning dyads did not differ significantly from those who did not on all study variables.

Procedure

Dyads were recruited via flyers advertising a study of children's early learning and development, which were distributed to community-based child development centers and preschools. Caregivers completed a brief intake screening by phone before scheduling a 3-hour laboratory assessment. Exclusionary criteria included children with diagnosed developmental disabilities and delays (*n* = 3), children who did not understand English (*n* = 4), and children outside the age range of 45-54 months (not tracked). At each wave, dyads participated in an extensive laboratory assessment during which the caregiver completed a semi-structured interview and questionnaires while the child completed measures of intelligence, representation, and regulation in an adjacent room. Midway through each assessment, dyads were observed during a series of interactive

problem-solving tasks. Informed consent was obtained from the child's biological mother or legal guardian at each wave, and child assent was obtained verbally at later waves. Mothers were compensated at a rate of $25/hour and children received an age-appropriate toy of their choosing at each assessment wave. All procedures were approved by the Human Research Review Board of the participating university.

Measures

Maternal Self-Sacrifice Overprotection (SSOP) was assessed at Wave 1 (age 4) based on each mother's completion of a Five-Minute Speech Sample (FMSS; Magaña-Amato, 1993) about what kind of a person her child is and how the two of them get along. FMSS narratives were audio-recorded and transcribed verbatim for SSOP coding. The FMSS of seven (3.1%) mothers who responded in Spanish were translated to English for coding and reverse-translated by two native Spanish speakers. Each FMSS transcript was rated by 3-6 coders who were blind to other information about the mother and child. Disagreements between coders were resolved through discussion until consensus was reached. Coders were trained to reliability (i.e., 85% agreement) by Wamboldt and colleagues using scoring procedures they adapted from Magaña-Amato (1993; Wamboldt et al., 2000). A random subset of 45 cases was double-coded by a separate group of 3-6 coders to evaluate reliability using Krippendorff's alpha, which accounts for the effects of small sample sizes, few coders, and ordinal data, across 5,000 bootstrapped samples (Hayes & Krippendorff, 2007). SSOP was conveyed by statements reflecting attitudes and/or behaviors that are self-sacrificing, overprotective, lack objectivity, or indicate boundary dissolution (e.g., "I'm concerned for him that he might starve for my attention;"

"I wanna be close to her. I can't stand it when she's out of my sight;" "When I feel like a little sad or sick, he always is behind me and telling me, 'Mommy I love you. Mommy, are you crying?' He's always asking me if I'm happy."). SSOP was scored as full (*2*) in 36 (16.1%) cases, borderline (*1*) in 11 (4.9%) cases, or absent (*0*) in 176 (78.9%) cases; α = .77.

Maternal Insensitivity was assessed at Wave 2 (age 6) when each mother was video recorded with her child during a series of semi-structured teaching tasks (e.g., building a puzzle, copying a drawing on an Etch-a-Sketch™, discussing a problem). Mothers were told to give the child as much help as she thought the child needed, but that the child should also have the opportunity to do as much as s/he could on her/his own. Independent coders blind to other information about the family evaluated the mother's supportive presence (reverse-scored), hostility, and intrusiveness during the interactions, with task order counterbalanced across coders, to capture key facets of insensitive parenting (Carlson et al., 1995; Egeland et al., 1993). Coders met to achieve consensus on the scores for each task, and consensus scores were averaged across tasks to yield a mean rating of each scale across tasks. Mean ratings were standardized and composited to yield a global index of maternal insensitivity (M = 0.00, SD = 0.83; ICC = .77). First, *supportive presence* captured the extent to which the mother provided a secure base for the child, and remained attentive to the child's needs for the duration of the task (Egeland, 1982). A mother scoring high on support (*7*) expresses positive regard and emotional encouragement or comfort for the child (e.g., "You got another one right;" "That's okay, just try again.") as a means of letting the child know that s/he has the

mother's support and confidence to do well in the setting. A mother scoring low on this scale (*1*) fails to provide supportive cues and may either be passive, uninvolved, or aloof, or gives the impression that she is more concerned about her own adequacy in the setting than her child's needs (i.e., an achievement orientation versus a child-centered, teaching orientation). Supportive presence was reverse-scored, such that a 7 indicated low support and a 1 indicated high support (M = 3.19, SD = 0.58; ICC = .75). Second, *intrusiveness* assessed the extent to which the mother lacked respect for the child as an individual and evidenced a failure to understand and recognize the child's efforts to gain autonomy and self-awareness. A mother high on this scale interferes with her child's needs, desires, and actual behaviors by behaving in accord with her own agenda rather than in response to the child's needs. Intrusiveness may be expressed in multiple forms, including harsh physicality (e.g., mother grabbing the child's arm and pulling her/him back to the table), inappropriate affection (e.g., contact which interferes with the child's efforts, such as excessive or unsolicited kissing, hugging, or grooming), or excessive control (e.g., a mother who does not give the child opportunities for self-directed efforts). In contrast, a mother scoring low on this scale may or may not be involved with the child, but only imposes directives on the child if it is clear that the child needs them (M = 2.00, SD = 0.59; ICC = .77). Third, *hostility* was indicated by the mother's expression of anger, discounting, or rejection of the child. A high rating indicates clear or overt rejection of the child (e.g., blaming the child for mistakes) or lack of emotional support for the child. A mother scoring low on this scale may or may not be supportive of the child, but she does not directly blame or actively reject the child (M = 1.47, SD = 0.49; ICC = .84).

Child Behavior Problems were assessed at Wave 3 (age 8), children and mothers completed the Behavior Assessment System for Children-Second Edition (BASC-2; Reynolds & Kamphaus, 2004) Self-Report of Personality (SRP) and Parent Rating Scale (PRS), respectively. Given evidence that "children and adolescents themselves may be particularly able to report on their own internalizing symptoms" (Achenbach, McConaughy, & Howell, 1987; Reynolds & Kamphaus, 2004, p. 80), we utilized the SRP Internalizing Problems composite score ($\alpha = .93$) to assess child internalizing problems. Children reported their internal thoughts and feelings on the SRP utilizing a 4-point Likert scale from never (*0*) to almost always (*3*) for some questions (e.g., "I am lonely"), and a true/false format for others (e.g., "nothing ever goes right for me"). Eight children provided values that exceeded acceptable limits on the SRP validity scales; thus, their SRP scores were considered missing for these analyses. Consistent with prior suggestions that outside observers rate children's behaviors more accurately than child self-reports (Loeber, Green, Lahey, & Stouthamer-Loeber, 1991; Reynolds & Kamphaus, 2004), we utilized mothers' PRS scores for Attention Problems ($\alpha = .86$) and Hyperactivity ($\alpha = .78$). Mothers rated children's observed behavior on a 4-point Likert scale from never (*0*) to almost always (*3*). Given the high correlation between these scales ($r = .64$, $p < .001$), and our inability to calculate the PRS Externalizing Problems composite score because we did not administer the Conduct Problems subscale, we created a composite measure of children's Attention/Hyperactivity Problems ($\alpha = .87$). All analyses were computed using BASC-2 *T* scores, which are calculated based on a nationally representative age-matched sample.

Child Intelligence was assessed at Wave 1 (age 4) using the Vocabulary and Block Design subtests of the Wechsler Preschool and Primary Scale of Intelligence-III (Wechsler, 2002). Verbal IQ was assessed using the Vocabulary subtest, which includes a receptive vocabulary test in which the child points at pictures to identify orally presented words for children who are less than 48 months of age and an expressive vocabulary test in which the child verbally explains what orally presented words mean for children who are 48 months or older. Performance IQ was assessed using the Block Design subtest in which the child was asked to assemble blocks to match models. A composite of Verbal and Performance IQ scores was used in these analyses.

Maternal psychopathology was assessed at Wave 1 (age 4) using The Brief Symptom Inventory (BSI; Derogatis, 1993) to obtain mothers' reports of psychopathology symptoms during the week preceding the interview. Mothers indicated how much 53 symptoms (e.g., "feeling lonely") bothered them on a 5-point likert scale from not at all (*0*) to extremely (*4*). The BSI is an abbreviated form of the Symptom Checklist 90—Revised (Derogatis, 1983) with acceptable reliability in clinical and community populations (Boulet & Boss, 1991; Derogatis & Melisaratos, 1983), diverse racial/ethnic groups (Hoe & Brekke, 2009), and in this sample (α = .94). The global severity index *T* score was used in these analyses.

Maternal stress was assessed at Wave 1 (age 4) using a list of 19 items from the widely-used Parent Stress Index (Abidin, 1995). Mothers were asked if an array of events (e.g., divorce, death, change in finances) had occurred in the immediate family during the preceding 12 months. If the mother endorsed "yes," she was asked to rate the effect it had

on her using a 5-point likert scale from extremely positive (*1*) to extremely negative (*5*) (Sarason, Johnson, & Siegel, 1978). Scores were recoded from extremely negative (*2*) to neutral (*0*) to extremely positive (*-2*) values and composited to yield an index of maternal stress.

Data Analytic Plan

Data preparation and missingness. Of the 223 dyads, 4 (1.8%) were missing maternal psychopathology data at Wave 1, 33 (14.8%) were missing ratings of maternal insensitivity at Wave 2, 40 (17.9%) were missing SRP reports of child internalizing problems at Wave 3, and 31 (13.9%) were missing PRS reports of child attention/hyperactivity problems at Wave 3. Missing data were addressed using the full-information maximum likelihood procedure (FIML) in Mplus 6.12 (Muthén & Muthén, 2010). FIML requires the assumption that data are missing at random (MAR). Although the assumption of MAR is not testable, Little's (1988) test assesses the stronger assumption of missing completely at random (MCAR), and indicated FIML was appropriate for handling these missing data, χ^2 (48) = 54.141, p = .252.

A multivariate analysis of variance (ANOVA) tested mean differences in child IQ, family SES, maternal psychopathology, maternal stress, maternal insensitivity, child-reported internalizing problems, and parent-reported attention/hyperactivity problems as a function of child gender and maternal race/ethnicity. Chi-square analyses evaluated group differences in SSOP by child gender, maternal race/ethnicity, and single mother status. T-tests and chi-square analyses evaluated differences in continuous and

categorical variables as a function of single mother status, respectively. Bivariate relations informed the selection of covariates for path analyses.

Model evaluation and multigroup comparisons. Path analyses evaluated whether maternal insensitivity mediated relations of SSOP to child adjustment outcomes. Independent variables (measured at Wave 1) and parenting (measured at Wave 2) were grand-mean centered to minimize collinearity. Absolute model fit was evaluated with the comparative fit index (CFI; > 0.95), the Tucker–Lewis index (TLI; > 0.95), and the root mean square error of approximation (RMSEA; < 0.06). Failure to meet these criteria on one or more fit indices was interpreted as poor model fit (Hu & Bentler, 1999). The significance of the indirect effect was computed using bias-corrected bootstrapped confidence intervals (CIs) across 5,000 resamples (MacKinnon, Lockwood, & Williams, 2004; Shrout & Bolger, 2002). Bootstrapping is preferred over more traditional approaches (e.g., product of coefficients) as it does not impose restrictive assumptions regarding the sampling distribution of the indirect effect and produces the most accurate CIs for indirect effects compared with other methods (MacKinnon et al., 2004).

Multiple group comparison analyses were used to evaluate moderation of the indirect effects by child gender, maternal race/ethnicity, and single-mother status. Several methodologists have recommended that researchers focus on the estimation of interactions between the moderator and the pathways that define an indirect effect to evaluate moderated mediation (e.g., Edwards & Lambert, 2007; Preacher, Rucker, & Hayes, 2007). Therefore, we used the MODEL CONSTRAINT command in Mplus to define each conditional indirect effect as the product of its constituent paths (i.e., X→M

and M→Y) at each level of the moderator and then to compare the two conditional indirect effects via bias-corrected bootstrapping. The moderated mediation models compared the conditional indirect effects from SSOP to child internalizing problems and attention/hyperactivity problems through maternal insensitivity for child gender (i.e., boys vs. girls), maternal race/ethnicity (i.e., Hispanic/Latina vs. non-Hispanic/Latina), and single mother status (i.e., single vs. partnered) in separate analyses.

Results

Descriptive Findings

A multivariate ANOVA indicated a significant main effect for child gender (Wilks' λ= .860, p = .002), but not for maternal race/ethnicity (Wilks' λ = .845, p = .219), nor for its interaction with child gender (Wilks' λ = .822, p = .094) across child IQ, family SES, maternal psychopathology, maternal stress, maternal insensitivity, child internalizing problems, and child attention/hyperactivity problems. Follow-up univariate ANOVAs indicated that girls obtained higher IQ scores than boys, and mothers reported lower levels of attention/hyperactivity problems for girls than boys (see Table 1). Relative to partnered mothers, single mothers obtained lower SES scores, t(221) = -2.130, p = .034, endorsed higher levels of stress, t(221) = 2.867, p = .005, and reported higher levels of child attention/hyperactivity problems, t(45.371) = 2.187, p = .034, but there were no significant differences in single mother status by child gender or maternal race/ethnicity. Chi-square analyses indicated that mothers of boys expressed higher levels of SSOP than mothers of girls, χ^2 (2) = 9.31, p = .010, yet there were no differences in

SSOP by maternal race/ethnicity, χ^2 (6) = 9.27, p = .159 or single mother status, χ^2 (2) = 2.26, p = .324.

Bivariate Analyses

As shown in Table 4, child IQ was related to lower levels of SSOP, lower levels of maternal insensitivity, and fewer child internalizing and attention/hyperactivity problems. Single mother status was associated with more child attention/hyperactivity problems. Family SES was negatively associated with maternal insensitivity. Both maternal psychopathology and maternal stress were associated with more child attention/hyperactivity problems. SSOP was positively related to maternal insensitivity, and positively related to child attention/hyperactivity problems. Maternal insensitivity was associated with more child internalizing problems and more child attention/hyperactivity problems. All primary variables of interest (i.e., SSOP, maternal insensitivity, child internalizing problems, and child attention/hyperactivity problems) were correlated in expected directions, except for SSOP and child internalizing problems, which did not evidence a significant association at the bivariate level.

Mediation Analyses

We evaluated a single predictive path model of the direct and indirect relations of child internalizing and attention/hyperactivity problems on SSOP via maternal insensitivity. In the initial model, we included child IQ, family SES, maternal psychopathology, and maternal stress as covariates for all endogenous variables (i.e., a fully saturated model). We then removed nonsignificant covariance terms, retaining significant covariances for SES with child IQ, SSOP with child IQ, maternal

psychopathology with maternal stress, and child internalizing problems with child attention/hyperactivity problems. Finally, we trimmed all nonsignificant paths from the covariates such that the prediction of maternal insensitivity controlled for child IQ and family SES, the prediction of internalizing problems controlled for child IQ, and the prediction of attention/hyperactivity problems controlled for maternal psychopathology. The final model fit the data well: χ^2 (9) = 9.215, p = .418; CFI = .997; TLI = .995; RMSEA = .010 ($CI_{90\%}$ = .000 - .076).

Unstandardized path coefficients for the direct and indirect effects with 95% bias-corrected CIs are presented in Table 5 and Figure 2. Maternal SSOP at age 4 was associated with higher levels of maternal insensitivity at age 6, above and beyond the significant associations of child IQ and family SES. In turn, maternal insensitivity at age 6 was associated with more child internalizing problems at age 8, controlling for the marginal association of child IQ, but was not significantly related to child attention/hyperactivity problems, controlling for maternal psychopathology. Maternal SSOP at age 4 was associated with more child attention/hyperactivity problems, but not with more child internalizing problems. Child internalizing and attention/hyperactivity problems were modestly correlated. Tests of the significance of the indirect associations of SSOP with child internalizing and/or attention/hyperactivity problems through maternal insensitivity revealed a significant indirect path from SSOP through maternal insensitivity to child internalizing problems, but not to child attention/hyperactivity problems.

Moderated Mediation Analyses

We examined three moderated mediation models that evaluated whether either of the indirect paths from SSOP to child adjustment via maternal insensitivity differed for boys versus girls, for children of Hispanic/Latina versus non-Hispanic/Latina mothers, or for children of single versus partnered mothers. None of the conditional indirect effects were significantly different from zero, suggesting an absence of moderated mediation.

Discussion

As a central facet of the family emotional climate, EE is thought to guide parents' behaviors in the context of interactions with their child (Kuipers & Bebbington, 1988). While the criticism dimension of EE evidences fairly robust associations with child adjustment problems and relevant parenting constructs (i.e., hostility, negative affect), relations between EOI and either child adjustment or the quality of observed parent-child interactions have been mixed with largely null findings. Such failures are hardly surprising given that the constructs encompassed by EOI range from facets that may be appropriate expressions of love or support for young children (e.g., exaggerated praise) to those that are more likely to indicate problematic patterns of intrusion or boundary dissolution at any age (e.g., SSOP). This variability has prompted concerns regarding the validity of EOI as an index of *over*involvement when parenting young children.

Both empirical evidence and theoretical considerations of family roles and boundary dissolution suggest that the SSOP EOI criterion may be a valid index of problematic parenting attitudes given its association with elevated levels of child internalizing and externalizing problems in extant work (e.g., Gar & Hudson, 2008; Khafi

et al., in press; McCarty & Weisz, 2002), its prominence as a marker of EOI in studies of adults and children alike (e.g., Magaña et al., 1986; van Furth, van Strien, van Son, & van Engeland, 1993), and one study suggesting that a rating of EOI that was revised to highlight the negative facets of EOI, most often SSOP, was related to problematic parent-child relations in adolescence (Wamboldt et al., 2000). This study evaluated an explanatory model of SSOP effects in early development wherein the hypothesized contribution of maternal SSOP during the preschool period to child internalizing and attention/hyperactivity problems four years later would be explained, at least in part, by observed indices of maternal insensitivity (i.e., low support, high intrusion, high hostility) during an intervening observation of parent-child interaction quality at age 6. Moreover, these analyses controlled for potentially confounding constructs that could influence SSOP, parenting, or child adjustment (e.g., child IQ, family SES, maternal psychopathology, maternal stress) and evaluated the invariance of these relations as a function of child gender, maternal race/ethnicity, and single mother status.

Consistent with expectations, mothers' SSOP regarding their 4-year-old child was prospectively associated with elevated levels of child attention/hyperactivity problems, but, unexpectedly, was not related to child internalizing problems at age 8. It is difficult to compare these findings with those in the extant literature due to the paucity of studies examining SSOP specifically. However, in the few studies that have examined SSOP, associations between SSOP and child internalizing problems have been documented primarily in clinical contexts when comparing diagnostic groups (e.g., Gar & Hudson, 2008; Raishevich et al., 2010); thus, the degree of clinical pathology in this community

sample may have been insufficient to evidence relations with SSOP. Alternately, the magnitude of the relation between SSOP and child attention/hyperactivity problems may have been magnified by shared method variance as a function of maternal expressions of SSOP and maternal ratings children's attention/hyperactivity problems.

As hypothesized, SSOP was associated with higher levels of maternal insensitivity during observed mother-child interaction tasks at age 6. These findings provide support for a central tenet of the EE framework, namely that the attitudes expressed by a parent in the context of the FMSS narrative are related to (and may guide) parents' interactive patterns with their child. In contrast to prior works, which have not found significant relations of EOI to observed parenting practices (e.g., Cruise et al., 2011; McCarty et al., 2004), our focus on SSOP is consistent with prior studies suggesting that SSOP may be the "active ingredient" in EOI, particularly in the context of parenting young children (e.g., Khafi et al., in press; McCarty & Weisz, 2002). In addition to our emphasis on SSOP, the strength of the obtained relation between SSOP and maternal insensitivity may follow from our reliable assessment of mothers' supportive presence, intrusiveness, and hostility in the context of observed mother-child interactions. Indeed, other authors have cautioned that their failure to reject the null hypothesis that EOI and parenting are *not* related may follow from the relatively low reliability of their parenting constructs, (e.g., Daley et al., 2003; McCarty et al., 2004).

Path analysis supported a significant indirect effect of SSOP on child internalizing through maternal insensitivity, whereas the significant effect of SSOP on child attention/hyperactivity problems was not significantly explained by maternal

insensitivity. The indirect path via parenting to child internalizing is consistent with extant work that suggests insensitive parenting (e.g., overinvolvement and overcontrol) may influence the development of internalizing problems by increasing children's perceptions of threat, decreasing their capacities to manage and control distress, and limiting their opportunities to gain mastery skills (see Gar & Hudson, 2008, for review). At the same time, the absence of an indirect effect of SSOP on attention/hyperactivity problems through parenting may suggest the presence of an alternate explanatory path from SSOP to child attention/hyperactivity problems. Current conceptualizations of attention/hyperactivity problems view difficulties with behavior regulation (i.e., the ability to activate or inhibit behavior in accordance with contextual demands; Posner & Rothbart, 2000) as a central deficit (e.g., Barkley, 2005). As such, the effect of SSOP on child attention/hyperactivity may be mediated by children's regulatory abilities to a greater degree than parenting practices. Although parenting processes invariably support or undermine children's emergent self-regulation (see Morris, Silk, Steinberg, Myers, & Robinson, 2007, for review), additional biological and/or social factors likely contribute to self-regulation and, by extension, to the proposed indirect path from SSOP to child attention/hyperactivity problems via self-regulation. Although one study has evaluated the role of emotion regulation in relations between EE and child adjustment (Han & Shaffer, 2014), none have evaluated the potential explanatory role of behavior regulation in pathways from SSOP to child attention/hyperactivity problems.

Alternately, the absence of a significant relation between maternal insensitivity and elevations in child attention/hyperactivity problems in this study may reflect our

inability to account for comorbid disruptive behavior problems (e.g., conduct problems). While multiple studies have implicated parenting in the development of child attention/hyperactivity symptoms (e.g., Carlson et al., 1995), others have failed to detect significant associations (e.g., Burke, Pardini, & Loeber, 2008; Johnston, Murray, Hinshaw, Pelham, & Hoza, 2002). Studies that separated attention/hyperactivity symptoms from oppositional behaviors and conduct problems, have shown that parenting quality was associated with oppositional and conduct symptoms, but not with attention/hyperactivity problems (see Deault, 2010, for review).

Our selection of multiple informants may provide a third explanation for the obtained findings. Differences in the relation of early parenting to child adjustment by informant have been detected in extant work. Although this study benefitted from the use of multiple informants with selections based on expert recommendations (i.e., child report of internalizing problems and maternal report of attention/hyperactivity problems; Achenbach et al., 1987; Reynolds & Kamphaus, 2004), the model may have been strengthened by an unbiased outside informant on children's attention/hyperactivity problems (e.g., teacher) rather than sole reliance on maternal report. For example, Jacobvitz and colleagues (2004) found that maternal hostility toward the child at age 2 was associated with teacher-reported, but not mother-reported, symptoms of attention/hyperactivity problems at age 7.

Tests of conditional indirect effects of SSOP to child adjustment via parenting indicated that the estimated pathways did not vary significantly between girls and boys, children of Hispanic/Latina and non-Hispanic/Latina mothers, and children of single

compared with partnered mothers. While these results suggest that the developmental processes under consideration may apply to these groups in comparable ways, they may be qualified by additional features of the data and study design. First, nearly three times as many mothers of boys as girls were rated as borderline or full SSOP, which may have constrained our power to adequately assess the moderation of SSOP effects by gender. Second, the current sample size necessitated our categorization of both Black/African-American and White/European-American mothers as non-Hispanic/Latina. Given evidence suggesting that some of the relational dynamics indexed by SSOP may be normative and potentially promotive within Black/African-American families due to the value placed on close family ties and parent-child mutuality (Khafi, Yates, & Luthar, 2014; McAdoo & Younge, 2009), the inclusion of Black/African-American mothers in the comparison group may have occluded meaningful differences between Hispanic/Latina and White/European-American mothers. Likewise, single mother status may take on differential salience as a function of child gender (e.g., Lee, Kushner, & Cho, 2007) or maternal race/ethnicity (e.g., Gibson-Davis & Gassman-Pines, 2010), but the current sample size precluded our evaluation of three-way moderation effects**.**

Strengths & Limitations

This study offers the first known evaluation of prospective relations among SSOP, parenting, and child adjustment. In addition, we evaluated this explanatory model while controlling for relevant features of the ecological context that may influence SSOP, parenting, and/or child adjustment, including child IQ, family SES, maternal psychopathology, and maternal stress. Finally, this research filled important gaps in the

literature by assessing the generalizability of hypothesized relations across groups by child gender, maternal race/ethnicity, and family structure. However, several limitations necessarily qualify these strengths.

First, although the longitudinal design of this study lends support for the directionality of our interpretations, our inability to evaluate a fully cross-lagged model precluded causal conclusions. Future work employing a fully cross-lagged model is needed to clarify whether SSOP contributes to parenting and parenting, in turn, contributes to child pathology, and/or whether child pathology may evoke problematic parental attitudes (i.e., SSOP) and/or parenting insensitivity. This is all the more important when studying parental attitudes, parenting processes, and child adjustment given robust evidence for the salience of bidirectional effects in the parent-child system (e.g., Bell, 1968; Hale et al., 2011). Second, as described earlier, this study may have benefited from teacher, rather than mother, reports on children's attention/hyperactivity behavior problems. Third, while our primary goal was to evaluate the explanatory role of maternal insensitivity, this composite measure may have occluded potentially meaningful differences in the effects of parenting on adjustment, particularly given evidence that individual parenting facets (e.g., intrusion) may have different effects by child gender (e.g., Carter et al., 2001; Jacobvitz et al., 2004), race (e.g., Ispa et al., 2004; Luis, Varela, & Moore, 2008), and/or single mother status (e.g., Lipman et al., 2002). Fourth, while we chose to focus on SSOP, investigations of other aspects of EOI that have been identified as potentially problematic in extant work (i.e., emotional display, statements of attitude) merit investigation in future research using models such as the one evaluated here.

Finally, other elements of the family emotional climate, such as the quality of the attachment relationship, parenting style, emotional expressiveness, and the emotional quality of the marital relationship, may also influence SSOP, parenting, and/or child adjustment, and warrant consideration in future research.

Implications & Applications

Prior studies highlight the clinical relevance of parental EE as a modifiable risk factor for child adjustment difficulties. Decreases in EE during and/or following the course of treatments targeting child behavior problems and/or parenting practices have been associated with improved child adjustment (Gar & Hudson, 2009; Vostanis, Burnham, & Harris, 1992). The current findings provide further support for interventions that directly target parental attitudes and/or parenting practices as valuable ports of entry (Sameroff, 2005) to attenuate child adjustment difficulties and dysfunctional parent-child relationships. Likewise, these data highlight the utility of the FMSS SSOP construct as a cost-effective, culturally valid, and clinically valuable screening tool for the detection of problematic parental attitudes that may confer elevated risks for insensitive parenting practices and/or child adjustment difficulties.

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Table 4

Descriptive and Bivariate Statistics for SSOP, Maternal Insensitivity, Child Adjustment, and Covariates

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1. Child IQ	---								
2. Single mother status	-.080	--							
3. Family SES	.307***	-.142*	--						
4. Maternal psychopathology	.015	.047	-.068	--					
5. Maternal stress	-.040	.189**	-.083	.300***	--				
6. SSOP	-.149*	.098	-.052	.071	.030	--			
7. Maternal insensitivity	-.211**	.115	-.245***	.082	.021	.177*	--		
8. Internalizing problems	-.206**	.087	-.144	.068	-.041	.118	.208**	--	
9. Attention/ hyperactivity problems	-.161*	.182*	-.053	.350***	.166*	.202**	.157*	.274***	--
Mean/%	95.408	18.834%	31.951	48.511	-1.076	0.372	0.000	49.858	52.542
SD	13.644	--	12.311	11.062	3.533	0.748	0.829	8.582	9.349
F/ χ^2 (gender)	3.905*	2.762	1.054	1.742	0.316	9.311**	2.561	2.063	11.981***

Note. Single mother status (0 = partnered, 1 = single); SSOP = self-sacrifice/overprotection.

*$p < .05$; **$p < .01$; *** $p < .001$

Table 5. *Unstandardized Model Estimates and 95% Bias-Corrected Bootstrap Confidence Intervals of Mediation Model*

Variable	Estimate	*SE*	*LLCI*	*ULCI*
Means and intercepts				
SSOP	0.000	0.050	-0.090	0.103
Maternal insensitivity	0.008	0.057	-0.103	0.118
Child internalizing problems	49.985	0.620	48.831	51.234
Child attention/hyperactivity problems	52.705	0.637	51.424	53.967
Child IQ	0.000	0.921	-1.832	1.830
Family SES	0.000	0.814	-1.543	1.646
Maternal psychopathology	-0.019	0.738	-1.441	1.491
Paths				
SSOP → Maternal insensitivity	0.167	0.074	0.028	0.323
Maternal insensitivity → child internalizing problems	1.687	0.706	0.214	2.963
Maternal insensitivity → child attention/hyperactivity problems	1.217	0.948	-0.685	3.027
SSOP → child internalizing	0.842	0.906	-0.915	2.654
SSOP → child attention/hyperactivity problems	2.120	1.057	0.148	4.267
Child IQ → maternal insensitivity	-0.008	0.004	-0.016	0.000
Family SES → maternal insensitivity	-0.014	0.005	-0.024	-0.004
Child IQ → child internalizing problems	-0.080	0.044	-0.166	0.007
Maternal psychopathology → child attention/hyperactivity problems	0.266	0.051	0.161	0.362
Covariances				
Internalizing with attention/hyperactivity problems	16.424	5.468	6.030	27.462
Child IQ with family SES	50.125	12.685	26.932	77.202
Child IQ with SSOP	-1.349	0.595	-2.555	-0.219

Variable	Estimate	*SE*	*LLCI*	*ULCI*
Indirect effects				
SSOP → maternal insensitivity → child internalizing problems	0.282	0.159	0.054	0.742
SSOP → maternal insensitivity → child attention/hyperactivity problems	0.203	0.191	-0.057	0.743
Direct effects				
SSOP → child internalizing problems	0.842	0.906	-0.915	2.654
SSOP → child attention/hyperactivity problems	2.120	1.057	0.148	4.267

Note. SE = standard error; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval; SSOP = self-sacrifice/overprotection; SES = socioeconomic status.

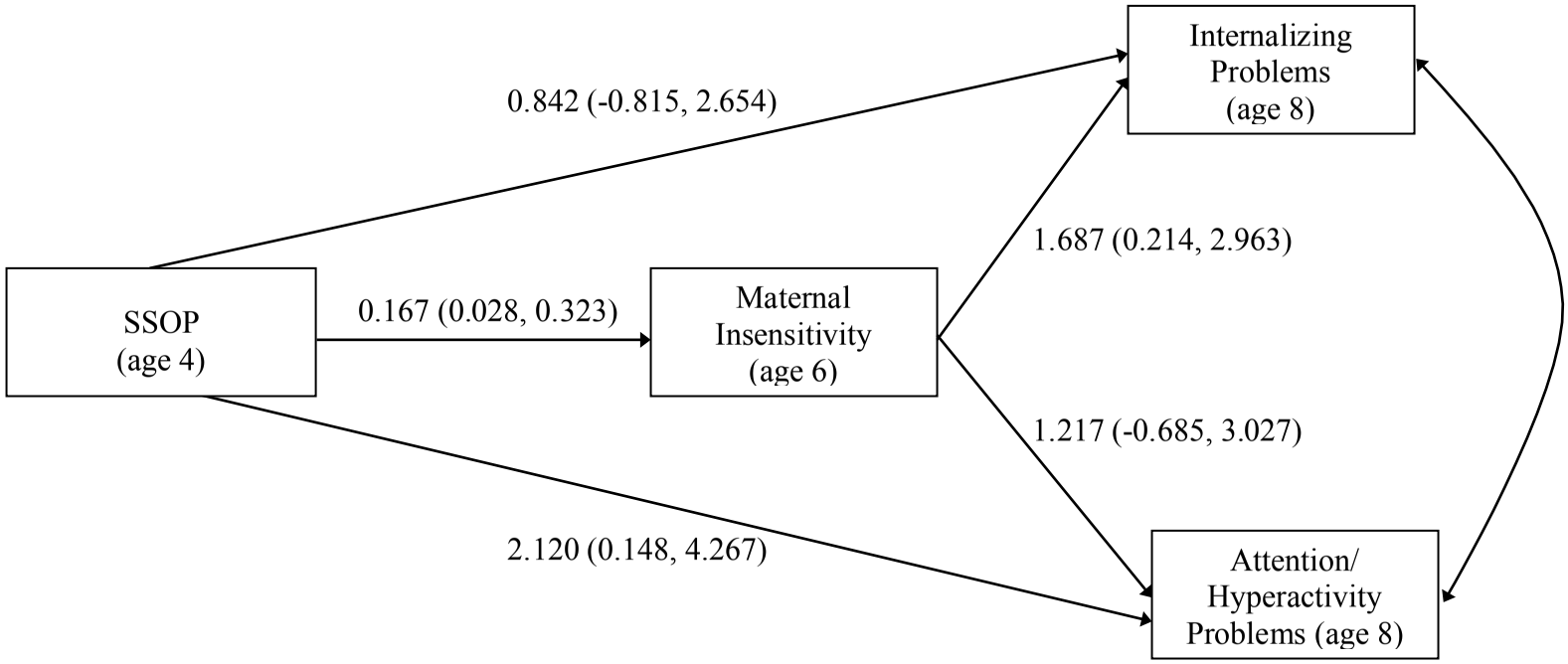

Figure 2. Mediation of the association between maternal SSOP and child internalizing and attention/hyperactivity problems by maternal insensitivity. The values in the figure are unstandardized path coefficients (95% CI in parentheses). Covariates are omitted for visual clarity.
Note. SSOP = self-sacrifice/overprotection.

CHAPTER 4 - GENERAL DISCUSSION

In the last two decades increased attention has been devoted to elucidating the developmental significance of expressed emotion as a dimension of the family emotional climate that may be related to adjustment in childhood. The family emotional climate may be disproportionately salient for young children because they spend the majority of their time in the family milieu, and thus are dependent on their parents for socialization, nurturance, and guidance (Campbell, 1995), whereas peers take on increasing salience in later childhood and adolescence (Sroufe, Egeland, & Carlson, 1999). Relational disturbances early in development are of particular concern as toddlerhood and the preschool years constitute important periods of development during which children internalize their beliefs and expectations about others (Bretherton & Munholland, 1999) and acquire independent self-regulation skills (Calkins, Blandon, Williford, & Keane, 2007; Calkins & Leerkes, 2011; Posner & Rothbart, 2000). Moreover, the organizational nature of development confers special significance on early experience as the foundation for later adjustment such that childhood disturbances in the family emotional climate may undermine the child's ability to successfully negotiate subsequent age salient issues (Sroufe, Egeland, & Kreutzer, 1990; Sroufe, 1990).

In addition to the influence of the family emotional climate in childhood on later adaptation, EE may be a valuable target for family-focused treatment efforts to promote positive child development. Several studies of *adult* children and their caregivers document relations between family-based treatments and reductions in family EE levels, with an associated reduction in relapse rates (Hogarty et al., 1991; Leff, Kuipers,

Berkowitz, Eberlein-Vries, & Sturgeon, 1982). Although only a few studies have examined changes in EE as a function of treatment with young children and their caregivers, preliminary findings point to decreases in EE during and/or following the course of treatment, with subsequent improvements in child adjustment (Gar & Hudson, 2009; Vostanis, Burnham, & Harris, 1992).

Given theoretical and empirical evidence that EE may be of special significance and open to modification in early development, this dissertation sought to advance our understanding of the relevance of EE to young children's adjustment by achieving two primary aims. The first study evaluated the relevance of the FMSS EOI construct for young children's adjustment given mixed relations in the extant literature that have prompted concern regarding the validity of EOI as a measure of pathological parental *over*involvement with young children. Building upon findings from the first study, the second study assessed an explanatory model wherein the most prominent and theoretically pernicious EOI criterion, SSOP, exerted a significant influence on child adjustment four years later via intervening observations of maternal insensitivity.

The Meaning of EOI in Early Development

Results from study 1 supported prior suggestions that EOI is not a cohesive construct for research and practice with young children (McCarty & Weisz, 2002; Psychogiou, Daley, Thompson, & Sonuga-Barke, 2007; Wamboldt, O'Connor, Wamboldt, Gavin, & Klinnert, 2000), and clarified the developmental implications of specific EOI criteria for understanding children's behavioral adjustment. Significant predictive relations emerged between SSOP and SOAs (but not exaggerated praise and

excessive detail) and increases in children's externalizing problems from preschool to first grade. However, EOI criteria were not related to changes in children's internalizing behavior problems. In addition, the relation of SOAs to increased externalizing problems was significant for boys but not girls, and observed relations of SSOP and SOAs to externalizing did not significantly differ between Hispanic/Latina and non-Hispanic/Latina mothers.

Findings from study 1 underscore the need to consider developmental differences in the functional significance of EOI, rather than extending adult-derived criteria downward in a fixed fashion. While excessive detail and exaggerated praise in the FMSS do not appear to undermine child development, these findings suggest SSOP indexes problematic parental attitudes that contribute to children's behavior problems across the developmental spectrum. However, it is important to anchor ratings of overprotection to developmentally salient markers. For example, content that may signify excessive overprotection in a relationship with an adult (e.g., "He's always by my side, I take him wherever I go") may indicate healthy emotional support and physical security when parenting a young child, and should not be taken as evidence of SSOP. Wamboldt and colleagues (2000) state that SSOP should be evaluated in consideration of the characteristics of the sample under study, noting, for example, that SSOP may not be pernicious among children with serious medical and/or psychological impairments because they require close parental monitoring and involvement. Although the authors do not make this point, one could argue the converse, namely that SSOP is likely to be most

problematic when it occurs in the absence of a legitimate need, and thus constitutes a parental failure to support the child's normative transition toward greater autonomy.

As mentioned earlier, the period from preschool to first grade (i.e., roughly ages 3-7) represents a period of change in the "developmental agenda" (Sameroff & Haith, 1996; Sameroff, 1989) in many cultures, including in the United States, when children evince increasing independence and responsibility (Whiting & Edwards, 1988). During the preschool period, sensitive parenting (i.e., provision of support for the child's autonomy while remaining warm and available for assistance) is implicated in the child's developing sense of competence and agency. In turn, as a function of sensitive parenting, the child's emergent sense of competence and agency enhances her/his ability to engage in self-regulatory control and self-reliant efforts when immersed in extrafamilial contexts, such as with peers and teachers (Sroufe, 1995). The transition to formal schooling (i.e., first grade) challenges children's abilities to function autonomously amidst new sociocognitive demands. As such, the attitudes indexed by SSOP, which presumably undermine the parent's encouragement of these key competencies, may be especially pernicious at a time when children are striving for (and age-salient developmental tasks call for) increased autonomy and individuation.

Of note, children's entry into preschool may constitute a significant challenge for parents, as well as for children. During this period, the parent must "let go" of the child and spend several hours without her/him each day. While potentially difficult for any parent, the required separation imposed by schooling may be experienced as particularly disruptive in a parent-child relationship with preexisting individuation/separation issues.

In these instances, parents may redouble their efforts to bind their child even closer in an attempt to prolong the intimate connection that typifies early childhood, and at the expense of the child's ability to progress toward greater individuation (Mahler, Pine, & Bergman, 1975).

The results of study 1 also indicated that statements of attitude (SOAs) may indicate pathological parental EOI, especially for boys. However, we are hesitant to make too much of this point before it is replicated in other samples and in the absence of more fine-grained analyses of the heterogeneity across different SOAs. As mentioned earlier, there were qualitative differences in the content of SOAs that may account for their apparent pernicious effect in some, but not all, cases. Whereas some SOAs connoted warmth and affection (e.g., "I love him. He's a good son."), others seemed to signify parental preoccupation with and reliance on the child (e.g., "I love him. He's everything to me."). Anecdotally, SOAs regarding boys tended to be of the latter type in this sample, but there is a need for more extensive examination of SOAs in larger samples before rendering a firm conclusion about the meaning of SOAs in early development.

Family structure is an additional contextual factor that may be relevant to understanding the quality and impact of SOAs on development. Post-hoc analyses indicated that more single mothers than partnered mothers expressed SOAs, which may reflect the centrality of children in a single-parent system. Although most of the research conducted on boundary dissolution in single-parent families has focused on the changes in family relationships and boundaries in the immediate aftermath of divorce, many of the dynamics and processes described therein may be equally applicable to families

characterized by long-term single-parent structure. In the context of divorce, for example, Peris and Emery (2005) describe that parents may look to their children to provide the emotional support and companionship previously supplied by their spouse. These same processes may occur in single-parent families, regardless of their divorce status.

Considering gender, some evidence suggests that that mothers may be more likely to engage in a form of boundary dissolution referred to as spousification (Sroufe & Ward, 1980) and/or seductiveness (Sroufe, Jacobvitz, Mangelsdorf, DeAngelo, & Ward, 1985) with their sons, rather than their daughters. Sroufe and Ward (1980) were the first to describe this phenomenon, wherein mothers exhibited a pattern of "seductive" behavior toward their young children, characterized by excessive physical affection, flirtation, and attention-seeking. These behaviors are distinct from the provision of normative, appropriate warmth and affection as the parents are meeting their needs at the expense of the child's, and also engaging in behavior with sexual undertones. In their studies of observed mother-child interactions, Sroufe and colleagues (1985) noted that spousification occurred mostly in mother-son dyads, and may reflect the mother's reliance on the son as a substitute for an absent partner. While SOAs index statements of love or devotion to the child (normative or potentially excessive and pathological), they may serve as outward signs of excessive parental reliance on the child for emotional support and affection that may be intensified in the absence of a romantic partner (i.e., a main effect of single-parent status), and evidence distinct relations by child gender (i.e., a three-way interaction). Indeed, a post-hoc analysis did show a significant three-way interaction across SOAs, child gender, and single-mother status, such that the effect of

SOAs on externalizing problems among boys of single-mothers was six times larger than its effect on boys of partnered mothers. However, as with the aforementioned qualitative heterogeneity across SOAs, these findings are highly speculative in advance of a more rigorous investigation.

The Relation of SSOP to Observed Parenting

Results from study 2 provided partial support for the primary theoretical assertion of the EE literature, which posits that *what* parents say about their child and the parent-child relationship reflects (or guides) *how* they interact with their child on a day-to-day basis (Chambless, Bryan, Aiken, Steketee, & Hooley, 1999). Higher levels of SSOP at age 4 predicted higher levels of maternal insensitivity at age 6, and maternal insensitivity predicted higher levels of internalizing (but not attention/hyperactivity) problems at age 8. Test of the indirect effects indicated that SSOP exerted a significant indirect effect, via maternal insensitivity, on internalizing problems, but only a direct effect on attention/hyperactivity problems. Moreover, none of the conditional indirect effects were significantly different from zero, suggesting an absence of moderated mediation by child gender, maternal race/ethnicity, and single mother status.

These findings suggest the attitudes indexed by the FMSS are prospectively associated with theoretically relevant parenting behaviors in the context of observed parent-child interactions. However, as we did not employ a fully cross-lagged model, we were unable to elucidate the specific nature of these relations. Namely, does EE influence or guide parenting? Or does it merely serve as a reflection of actual parenting behaviors?

In attempting to elucidate the etiology of EE and its influence on parenting, it is necessary to consider both parent and child effects. There may be constitutional differences in children that affect behavior, such that "the model of a unidirectional effect from parent to child is overdrawn, a fiction of convenience rather than belief" (Bell, 1968, p. 82; Sears, Maccoby, & Levin, 1957). The development of the child emerges from continuous interactions of the child and the experience provided by her/his family or social context. In this bidirectional model, the experiences provided by the environment are not viewed as independent of the child; the environment is conceptualized as dynamic, capable of both influencing and being influenced by the child (Karraker & Coleman, 2005).

SSOP indexes problematic parental internal working models of a parent-child relationship characterized by boundary dissolution (i.e., difficulties acknowledging the psychological distinctiveness of the child). Family systems theory and related work on parentification (i.e., parent-child role reversal) posits that parents that experienced boundary dissolution in their family of origin internalize the relationship roles and parenting practices they experienced and recreate these patterns during parenthood (Boszormenyi-Nagy & Spark, 1973; Kretchmar & Jacobvitz, 2002). Indeed, some empirical work has supported these hypothesized relations, as one study found maternal history of parentification in her family of origin predicted mother-toddler role reversal at 24 months (Macfie, Fitzpatrick, Rivas, & Cox, 2008), and another study documented a significant indirect effect of maternal history of destructive parentification in her family of origin on her own child's externalizing behavior through maternal warm

responsiveness (Nuttall, Valentino, & Borkowski, 2012). These studies indicate that maternal early experience may contribute to SSOP and related parenting practices.

However, as mentioned previously, SSOP may also constitute a response to child characteristics such as a gender or medical and/or psychological impairments. Future work employing a fully cross-lagged model is needed to clarify whether SSOP contributes to parenting and parenting, in turn, contributes to child pathology, and/or whether child pathology may evoke problematic parental attitudes (i.e., SSOP) and/or parenting insensitivity.

Mechanisms Linking SSOP with Child Adjustment

In study 2, SSOP exerted a significant indirect effect, via maternal insensitivity, on internalizing problems, but only a direct effect on attention/hyperactivity problems. The indirect path via parenting to child internalizing is consistent with extant work that suggests insensitive parenting (e.g., overinvolvement and overcontrol) may influence the development of internalizing problems by increasing children's perceptions of threat, decreasing their capacities to manage and control distress, and limiting their opportunities to gain mastery skills (see Rapee, Schniering, & Hudson, 2009, for review). At the same time, the absence of an indirect effect of SSOP on attention/hyperactivity problems through parenting may suggest the presence of an alternate explanatory path from SSOP to child attention/hyperactivity problems. Current conceptualizations of attention/hyperactivity problems view difficulties with behavior regulation (i.e., the ability to activate or inhibit behavior in accordance with contextual demands; Posner & Rothbart, 2000) as a central deficit (e.g., Barkley, 2005). As such, the effect of SSOP on

child attention/hyperactivity may be mediated by children's regulatory abilities to a greater degree than parenting practices.

Although parenting processes invariably support or undermine children's emergent self-regulation (see Morris, Silk, Steinberg, Myers, & Robinson, 2007, for review), additional biological and/or social factors likely contribute to self-regulation and, by extension, to the proposed indirect path from SSOP to child attention/hyperactivity problems via self-regulation. Although one study has evaluated the role of emotion regulation in relations between EE and child adjustment (Han & Shaffer, 2014), none have evaluated the potential explanatory role of behavior regulation in pathways from SSOP to child attention/hyperactivity problems. We intend to examine this possibility in a future study.

Future Directions

This dissertation drew on a large and diverse sample of child-mother dyads who completed a series of longitudinal assessments to improve upon the limitations of extant work, which has used samples of limited generalizability in largely cross-sectional research designs. Both studies address significant gaps in the literature by clarifying the significance of individual EOI criteria for internalizing and externalizing child adjustment problems, and evaluating an explanatory model to account for these relations during a period of development in which family emotional processes are especially salient. In addition, these analyses controlled for potential confounds (e.g., child IQ, family SES, maternal psychopathology, maternal stress) to evaluate the unique contribution of EOI criteria to child adjustment and parenting. The evaluation of model invariance across

groups in both studies suggested that the developmental processes under consideration are largely applicable to different groups by child gender, maternal race/ethnicity, and (in study 2) family structure in comparable ways, save a significant difference in the effect of SOAs on externalizing, which was significant for boys but not girls.

These studies stimulate interest in the investigation of specific facets of EOI (i.e., SSOP, SOAs) as related to the quality of parenting practices and child adjustment. Obtained findings highlight specific aspects of EOI that are potentially problematic and merit further attention, but future work must assess whether these relations hold in samples of varying risk (e.g., children with chronic medical disorders who may warrant greater levels of concern), in clinical samples, and over time.

As noted earlier, future work would benefit from a fully cross-lagged model to clarify whether SSOP contributes to parenting and, in turn, to child pathology, and/or whether child pathology evokes problematic parental attitudes (i.e., SSOP) and/or parenting practices. Likewise, additional explanatory models, such as a regulatory model where in SSOP contributes to adjustment via children's self regulation (see Han & Shaffer, 2014, for example), should be evaluated in future work, particularly as may be relevant for understanding child attention/hyperactivity problems.

While the present studies contributed to our understanding of the relation of EOI to child behavior problems, little work has examined the influence of EOI and/or SSOP on child functioning in other domains. SSOP encompasses overprotective, overinvolved behaviors, and may also connote dissolved boundaries in which a parent relies upon the child to meet his/her own needs, and may therefore be especially relevant to children's

social competence. In this context, the child is likely to experience over-involvement with parents at the expense of under-involvement and isolation from peers (Dawson, 1980). Moreover, social impairment may follow from adjustment difficulties related to SSOP as when internalizing problems may prompt a child to withdraw from interactions with peers, or externalizing problems make a child difficult to deal with, less likely to be chosen as a companion, or disliked by a teacher (e.g., dual failure models; Masten et al., 2005; Patterson, DeBaryshe, & Ramsey, 1989). Importantly, social rejection may reciprocally influence (and thereby exacerbate) internalizing and externalizing problems as well.

In addition to examining other adaptive domains in which SSOP may be influential, there is a need for greater investigation of potentially differential influences of the family emotional climate on sons versus daughters. SSOP may also be relevant to children's academic achievement as maternal intrusiveness and the converse (maternal support for autonomy) have been associated with lower and higher academic achievement, respectively, in extant work (Egeland, Pianta, & O'Brien, 1993; NICHD Early Child Care Research Network, 2008). Interestingly, in one study the association of maternal support of autonomy when the child was 54 months old and increased academic achievement in the third grade was significant for boys but not for girls (NICHD Early Child Care Research Network, 2008). This is consistent with the finding from study 1 that parenting variables (i.e., the effect of SOAs on change in externalizing) may be more relevant to boys' developmental outcomes. Given the higher rate of problematic EOI criteria (i.e., SSOP and SOAs) endorsed by mothers of boys relative to mothers of girls,

and the apparent sensitivity of boys to parenting influences, further work examining the nature of the etiology, function, and form of these maternal attitudes/behaviors may be of significant value.

In combination, efforts to clarify the directionality, generalizability, and specificity of EE effects will inform the selection of so-called "ports of entry" (Sameroff, 2005) for intervention. For example, if child's symptoms evoke insensitive parenting and maladaptive parental cognitions, applied interventions can focus on treating/managing child symptoms (e.g., Gar & Hudson, 2009). However, if SSOP guides problematic parenting, parent-focused interventions to shift parental perceptions and interpretations and foster parental attention to, and consideration of, the child's needs and autonomous desires will be of immense value. These longitudinal predictions underscore the importance of elucidating the processes that undergird these relations to develop effective interventions early in life for parents and children at risk. Importantly, these studies suggest that the FMSS SSOP construct may offer a cost-effective, culturally valid, and clinically valuable screening tool for the detection of pathological parental attitudes that may confer elevated risks for insensitive parenting practices and/or child adjustment difficulties.

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